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ORIGINAL LECTURES.

THE TREATMENT OF PNEUMONIA BY VERATRUM VIRIDE AND DIGITALIS.

Abstract of a Lecture
Delivered at the University of Pennsylvania,

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PASSING from the subject of digitalis in cases of heart disease, let me call your attention, gentlemen, to its use in some cases of acute disease. Just as in heart disease failing heart-power is a positive indication of the necessity for the use of digitalis, so in acute disease failing heart-power is a reason for its use. In order that you may better understand the principles that govern your employment of the drug in cases of acute heart-failure, let me take the subject of pneumonia. It is unnecessary for me to refer to the symptoms in detail, and I will do so only so far as to enable you to apply the principle to diseases of that class. In order better to understand the use of this drug in pneumonia, it seems to be essential that you should have knowledge of the use of drugs whose effect is the opposite of that of digitalis; I therefore ask your pardon for bringing forward here certain general facts in regard to drugs which are not cardiac stimulants, but are cardiac sedatives. Let us suppose that we have a drug which is a powerful cardiac sedative, which is the opposite of digitalis, and which is also a powerful vascular sedative, causing dilatation of the bloodvessels. Such a drug we find in veratrum viride.

Now we take a case of ordinary pneumonia. We are called to it in the very flush of the disease. We find that the chill has passed by, that the patient has a high fever, that there is a high, bounding pulse, full and strong. We notice, also, that the lower lobe over the left lung is full of blood. What has brought the flux of blood to that point? There has been everywhere in the lower lobe of that lung a dilatation of capillaries, a vacuum, the effect of a relaxation of pressure. The heart being excited and the arterial pressure being continued, these relaxed, dilated vessels draw the blood into them, the whole lobe becomes full of blood, while the arterial or capillary system everywhere is contracted save only in this lobe over the lung. Under such circumstances digitalis is to be used. In the first place, it depresses and quiets the heart, it reduces the arterial pressure and drives the blood into that territory where resistance to blood entrance is slight. But it does more than this. It builds up the capillaries all through the system. You will remember that the relaxed vessels of the abdomen are of such size that they are capable of holding all the blood in the body. You can put all the blood of a man, after death, in his abdominal vessels, and they will not be over full. Now when, under the influence of a dose of veratrum, the heart has been lowered in power and the whole abdominal cavity has been opened wide, there is then a great suction of blood away from this lung. The blood that fills and chokes up this territory goes off to the abdomen, and you thus get an effect which, in days gone by, our ancestors got by the use of the lancet. You bleed a man, not into a bowl, but you bleed him into his own abdomen; and after the danger has passed by, you have not taken power from the general system. You depress, but you do not exhaust, the patient. Thus, in pneumonia, the period comes when power is needed to support the disease; it does not find the patient wholly exhausted by reason of the bleeding, but by the use of veratrum the functional activity returns. Bear in mind that depression is not exhaustion—that depression is the strong man's safeguard, that exhaustion is the strong man's danger. In pneumonia, therefore, if you have this condition of depression from veratrum early in the attack, you have reduced the congestion and possibly limited the force of the disease. But let the case go along. By and by a time comes when half, or a third, or perhaps the whole of one lung is consolidated. What does that mean? Suppose that we have a pair of lungs each of which is full of capillaries, the cavity between them affording a channel of communication between the right and left sides of the heart. We will say that in the upper part of the left lung there is a channel of communication, which is represented by 100, and in the lower lobe one of the same size, and again one in the right lung. Thus there is normally a cavity or a channel, represented by "400," through which the blood flows from the right to the left side of the heart. There comes an outpouring of plasma; all these capillaries are pressed upon—practically they are obliterated; and if a whole lung is obliterated, as sometimes happens, there is only half-communication between the right and left sides of the heart. Do you not see that, under these circumstances, the right side of the heart is placed under a perpetual strain, and that the strain increases all the time, from a little failure at this moment to throw back a little blood into the venous system and at the next moment a little failure to throw an increase of blood to the venous system? By and by the pressure is all on the right side of the heart, and the patient dies. Under these circumstances you have the right side of the heart becoming angry, though impotent in its rage, acting spasmodically and in every possible way except the right and proper way. You give a full dose of the digitalis, and continue its use until you have some evidence of its presence. The effect will be that the right side of the heart will begin to beat slowly and with long pauses. There is a driving force behind the blood, which throws it through this narrow channel, fills up that left ventricle and restores the balance of the circulation. You cannot do this with any remedy so well as you can do it with digitalis. It is more powerful than any other, though slow in action. Alcohol does not do this. Alcohol is a

stimulant of the general system. It has some power over the heart, but it is a power that is a weakness as compared with the power of digitalis. Therefore, in advanced pneumonia there is no remedy that will take the place of this drug. But bear in mind that you have to give it in sufficient doses to produce an effect. If you are afraid of it, if you give it homœopathically, if you merely rub the back of the patient's neck with the bottle, the disease will hold its own. Here, as in all cases where you are using digitalis fully and freely, you watch the pulse, and will remember that its influence is to determine your treatment. Having given the digitalis, you may find, at eight o'clock in the morning, when you visit the patient, that you have a distinct digitalis pulse; then you will wait until three o'clock, or perhaps until six o'clock, and, if you find that your digitalis pulse is losing, you will throw in your dose of digitalis—your doses being guided always by the pulse.

Digitalis is useful in advanced stages of typhoid fever, when the pulse fails. It is useful in any acute disease when the pulse fails. But remember always that experiments have shown that a very high temperature renders the system less susceptible to the action of digitalis. It is not true that digitalis will not act when the temperature is up. I have over and over again seen it act with great power in cases in which the temperature was 105°. This high temperature simply makes the heart more rebellious; it does not suspend the activity of the digitalis.

In acute syncope digitalis is of value. Recollect, however, that it is very slow in its action—that in order to get any effect from it you must give it hypodermically.

EXTREME BLOOD-PRESSURES.

Notes from the Clinics of Dr. S. Weir Mitchell at the Infirmary for Nervous Diseases of the Orthopædic Hospital.

[Reported by GUY HINSDALE, M.D.]

THE interesting case which I present to you to-day I bring before you chiefly for the purpose of calling your attention to its peculiarities, some of which may have escaped your notice. I do not purpose dwelling on them for the length of time I would give to them in a lecture, but simply to call your attention to the facts before us. For example, here is the case of Mr. B. G., aged forty-one, who is suffering from paralysis of the right side of the body, with aphasia, due, I think, to the occlusion of an artery in the left side of the brain. I do not intend to go into the details of the case, but I will state that he has had albumin and granular casts in his urine for more than a year, although he has never suffered in any other way up to January 9, 1888.

At twelve o'clock of that night he had the attack of hemiplegia of which I have just spoken. He was unconscious for two days, but does not think that he was convulsed. The urine was drawn for three weeks. After the fourth week he was able to walk, and gradually regained power both in the legs and arms. The dynamometer showed 90 on the right side and 95 on the left. There was no disturbance of sensation or of intelligence. There were no hallucinations, and he slept well. There was no vertigo. The speech was slow. Station fair. Knee-jerk ++ on both sides; reinforcement normal. He hesitated in speech and failed to find some words, although he could get the desired word after a good deal of effort. There was a slight apex systolic murmur.

The disks of both eyes were very cloudy on the edges and somewhat swollen—the left more than the right. The central veins were fuller than normal. There were large quantities of albumin in the urine, and a considerable amount of granular casts at all times. The patient, however, is very much better than when he entered our wards. He walks better and is less irritable. There is at present just a trace of albumin in his urine.

I have omitted his skimmed milk at present (for he takes nothing else), that you may see the condition to which I desire to call your attention. I have also had the iron stopped for three or four days. He now shows to an imperfect degree what he showed to excess when he entered the hospital. As you will observe, on the right side of the head the temporal artery is large and remarkably serpentine. If you compress its course to absolute obliteration of the blood-flow, it continues to pulsate beyond the point of pressure; moreover, it pulsates strongly. This must, of course, be due to the fact that, owing to the great intravascular pressure, the anastomosing vessels below the point compressed convey to ultimate branches of the temporal the cardiac impulse, and perhaps, too, all are dilated, as the temporals are most certainly.

It is not a little singular that, after the first few days of treatment, this symptom, having disappeared on the right side, became distinctly visible on the left. If you examine the pulsations in the arteries at the wrist you will find that they, too, are full, strong, and difficult to obliterate; but when pressed upon so as absolutely to stop the blood-current, we do not see the same phenomenon as in the temporals, where it is obvious even to a careless observer. When, two years ago, I first saw this phenomenon, it interested me greatly, as this evidence of very high tension is rarely found, except in very old people with diseased arteries, or in certain cases of Bright's disease. The case before you illustrates it admirably.

Without remarking further upon this special example, I desire to call your attention to one as interesting. The patient some of you saw last year. He is a merchant from New England, aged thirty-eight, who came here complaining of intense pain in the head. These headaches were so violent as to make it necessary for him to remain in bed for several days at a time. They had been attributed to different causes, but, strangely enough, never to the right one, until he came hither in March, 1887.

The man was tall—six feet two inches in height—and extremely pallid. The blood-corpuscles, which were counted by Dr. J. K. Mitchell, were 4,100,000 per c. mm. and the hæmoglobin 95 per cent. The urine was clear and pale. Sp. gr. 1012, with abundant albumin and epithelia of yellowish tint. There were uric acid, some blood-clots, much granular matter and numerous casts.

The heart was large and irregular in action. There was a strong apex systolic murmur heard around under the left shoulder.

Dr. de Schweinitz made careful examinations of the eyes. His statement, which I append below, shows the remarkable changes in this interesting case. The tension in the temporals exceeded anything I have ever seen.

It was difficult to compress them, and when we did so the throb beyond the point of pressure was almost as great as though no interruption had been made to the arterial current. At first it was possible to feel pulsations when, with the compressing fingers above and below, two inches apart, we sought between them the evidence of continued pressure. You could notice in this case, as in the one last related, the enormous amount of tortuosity, the left artery sometimes exceeding the right as to this, or, again, the right being the larger and more crooked. The tension in the radials was also the greatest I have ever met with. It was difficult for me to understand how, with so much pressure, it was possible for life to go on and for vessels to remain unruptured. This is the only case in which I found it impossible to stop pulsation in the radial beyond the finger, after all circulation had been locally obliterated by pressure. Since then I have seen it twice. This phenomenon was not as marked as in the temporals, but it was sufficiently apparent to anyone.

This sign of high tension is a somewhat valuable symptom, because it disappears with great readiness under certain treatment; and this fall of pressure is an excellent indication of improvement on the part of the patient. I may as well say to you here that in nearly all the cases of very high tension with renal disease, there is also retinal trouble—at least it has so appeared to me. While this tension is thus greatly increased beyond the normal blood pressure, it is usually capable of being more or less controlled by a number of means; thus, in the last case mentioned, the individual having been put on a diet of skimmed milk alone, the tension in the radials fell from 600 of an arbitrary scale to 450 within a week. When to this there were added thirty-five drops of the tincture of the chloride of iron, four times a day, with an increased amount of milk, another week brought the tension down to one-half of what it was at the beginning of this diet. The headaches rapidly improved and the sluggish condition of the extremities disappeared.

Finally, his eyes to a large extent recovered their power of vision, as to which I leave Dr. de Schweinitz's notes to tell. It was, however, a hopeless case and has since died, but life was undoubtedly prolonged for more than a year, and he escaped great suffering. He was enabled, also, for a time to go back into active business and to take such care of his large affairs as was necessary for the future protection of his family. He lived on milk for many months and took tincture of the chloride of iron in doses of half an ounce a day.

Examination of eyes by Dr. de Schweinitz:

January 22, 1887. R. E. vision equals 1/6 of normal. L. E. vision equals 1 of normal. Extensive albuminuric retinitis. Enormous swelling of the optic disks. In the R. E. 1.12 mm.; L. E. 1.00 mm.

February 14, 1887. R. E. vision equals 1/4 of normal; L. E. 1/4 and part of 1/8 normal.

March 23, 1887. Vision in the R. E. equals 1/2 of normal; the summit of the disk still unchanged. L. E. vision 1/2 of normal, with part of 2/3 of normal; disk distinctly less swollen—0.92 mm.

April 13, 1887. Vision in the R. E. 1/2 of normal, and swelling of the disk 0.92 mm. Vision in the L. E. 2/3 of normal; swelling of the disk 0.85 mm.

The chief changes observed from his first visit, January 22, 1887, to his last visit, May 31, 1887, were a gradual lessening in the size and extent of the infiltrated optic disk, causing the diminution in elevation noted above; the clearing up of the retinal infiltration in the neighborhood of the macula causing the improvement in direct vision, which, at the beginning, was only 1/6 of normal; but at the last visit was full 2/3 of normal. No special changes were noted in the vessels of the retina, except that as the infiltration lessened, outlines previously hidden became visible.

In conclusion, I desire to add, in brief shape, the case of L. P., aged twenty-six years, clerk. He presented all the signs of advanced Bright's disease—enormous tension, great œdema, diseased heart, and total blindness. I have mislaid Dr. Dyer's notes of the eye-changes. My own records state that his eye-ground was disfigured with hemorrhages, old and new; and he was unable to go about the streets alone, as he could barely distinguish day from night. Tinct. ferri chlor. had been used up to one ounce a day, with no relief.

Under diet without meats or eggs, and seven drachms a day of tinct. ferri chlor., he regained sight so as to be able to keep books for several months, and supposed himself well; but, as usual, at last the symptoms returned. The sight, however, remained good up to death, two years later.

In one of the hospital cases I used nitrous ether alone, and then other iron salts, but got no such results as from old tinctures of iron. Of course, tincture of iron has been much used in these cases, but perhaps not in heroic doses.

The ether present in tincture of iron is usually held to be responsible for some of its effects. Mr. Frank E. Morgan has been kind enough to distil for me an old tincture of the chloride. He obtained early an ounce of ether from one pint of tincture. The amount is so small that it seems difficult to see how the fraction of it in sixty grain doses of tincture could be a powerful agent. It did not seem to be such when used apart from iron.

The process was conducted very carefully, the distillate being collected in fractions and identified. At no time, either by physical or chemical tests, could any ether be found other than nitrous ether. Mr. Morgan writes that while it is claimed that very minute quantities of other ether or ethers are at times present, he has not found any positive statement as to their character. He adds, that from the fact that an excess of hydrochloric acid is used in preparing the tincture, it is often inferred that ethyl chloride or hydrochloric ether is present, but as this ether is formed with difficulty, and perhaps only in presence of free chlorine, it is extremely doubtful.

I used this ether in twenty to thirty minim doses in the cases of excessive blood-pressure with little effect. With the practical results of the treatment of these cases I am well pleased, but it seems to me that we are left without an explanation of the facts. It is generally accepted as true that the salts of iron raise the blood-pressure; as regards abnormal pressures in renal disease the reverse is correct for perchloride of iron in alcoholic solution. Whether other astringent ferric salts act in like manner I do not yet know, nor is it quite clear how the lowering of pressure is effected, but of its amount and permanence you have been able to judge.

THE PRESENT EPIDEMIC OF INFLUENZA.

A Clinical Lecture delivered at the Pennsylvania Hospital, January 11, 1890,

BY J. M. DA COSTA, M.D., LL.D.

[Reported by WILLIAM H. MORRISON, M.D.]

GENTLEMEN: The occurrence in our midst of an epidemic of catarrhal fever or influenza, and the fact that we have had a large number of cases of this disease in our wards, have suggested the propriety of giving you a lecture on the subject, in which the prominent groups of the disease might be laid before you, and which would serve to illustrate not simply a single case, but the varieties of this strange malady.

It is not my purpose to treat the subject historically, but rather to view it clinically. I have myself passed through more than one epidemic of catarrhal fever, and can claim familiarity with its symptoms; and comparing what I have seen in previous epidemics with what I have found in this, I shall be able, as I proceed, to point out how the present epidemic differs from those of previous years.

This widespread malady, which has committed such havoc on the Continent of Europe, and which has proven itself here, in the last month, so destructive to comfort and so perilous in its secondary consequences, is of uncertain origin. It comes; it goes. It comes without warning; it disappears, leaving behind it sporadic cases, but speedily loses all trace of its epidemic form. As I have told you, however, I propose to treat the subject from a clinical standpoint, rather than view it pathologically or in its broad general aspects. I shall, therefore, introduce my subject by showing you a few cases which illustrate different types of the malady.

CASE I.—This man, a German, was admitted to the hospital January 9, 1890. His family history is good. He does not drink, and has had no severe disease. Eleven years ago he had some kind of fever, but has not been ill since then. The present illness began abruptly, December 25th, with chilly feelings up and down the spine, followed by headache and some cough, which occurred in paroxysms, and was especially severe in the evening. There was no expectoration. He had a general sore feeling. There was slight constipation, and soreness over the abdomen, which was thought to be due to the cough. The eyes and nose discharged freely. He consulted a physician, and in a day or two improved; all the time he continued at work. January 6th he began to show signs of a relapse. All his previous symptoms returned with great severity, and he became so weak that he could not stand. On admission into the hospital he had cough, a sore feeling all over, the eyes discharged freely, the temperature was 99°, pulse 76, and respiration 28. A few bronchial râles could be detected. The tongue was tremulous, flabby, and slightly coated. The knee-jerk was present; the urine was of a dark amber color, specific gravity 1034; no albumin.

Examining him this morning we find that the tongue is covered with a white coat. He still has watery eyes and cough; the temperature is 98°; he has harsh respiration at the base of the left chest; at the lower part of the right chest posteriorly the respiratory murmur is feeble, and on percussion the resonance is not so great as on the left side. We find the same signs anteriorly. There is, therefore, some congestion of the lower part of the right lung. The heart sounds are normal so far as murmur is concerned, but the first sound is rather feeble, which corresponds with the very compressible state of the pulse. The bowels still tend to constipation. He does not perspire except after the paroxysms of coughing.

CASE II.—This man is thirty-three years of age. The present attack began two weeks ago with dizziness, some vomiting, and cough. The bowels were constipated. There was sore throat and coryza. Although a strong, robust man, he rapidly grew very weak. There was profuse sweating after coughing. There was no special shortness of breath. There was general soreness, with a great deal of pain in the bones, especially at the wrists; none in the spine. The great debility was the most marked symptom in this case, and was the more noticeable on account of the former condition of the man. A few days ago he had repeated chills and tremulousness of the hands. The constipation has, in the last day or two, been succeeded by diarrhœa. When admitted, the temperature was 98°, the pulse 76, and the respirations 20. The patellar tendon reflex was present. The urine was dark, with a specific gravity of 1030, of acid reaction and contained a trace of albumin, which still persists. It is but fair to state in this connection that the man has been a free liver. He also showed signs of a good deal of catarrh. The eyes were watery. Coryza existed in the early part of the attack, with considerable sneezing.

He is still very weak. This morning the temperature is 98.4°; the pulse is 60 per minute and is extremely weak; it is absolutely thready. The first sound of the heart is so feeble that it can barely be detected. This is very much like the heart we get in an advanced stage of typhoid fever, barring, however, the difference in rapidity. Here the heart is slow, while in typhoid fever it is usually rapid. There is no murmur, but a distinct, sharp second sound. There is harsh respiration on the left side, and some impairment of resonance below the area of harsh respiration, showing congestion. Râles were noticed, but I do not hear them this morning. The splenic dulness extends just to the margin of the ribs. The hepatic dulness is normal.

In the way of treatment he has received for the throat a gargle of salicylate of sodium with glycerin and water. He has taken twelve grains of quinine a day, and a mixture containing muriate of ammonium. This cough mixture need now be given only occasionally, and we shall order him four ounces of whiskey a day and one one-hundredth of a grain of strychnine every fourth hour. He will also have turpentine stupes applied to the back of the chest, especially on the left side.

There are so many cases of this malady in the hospital that, in one clinic, I could hardly exhaust them. But I will show you one more case, which is of great therapeutic interest.

CASE III.—This man is twenty-six years of age, and has been in the hospital since December 26th. When admitted, his temperature was 100°, his pulse 88, and his respiration 34 per minute. His eyes were injected and his tongue coated. His heart's action was weak, and there was noticed reduplication of the first sound and a faint systolic mitral murmur. The man was very weak. The lungs were normal, with the exception of a few

mucous râles. His symptoms were those of such prostration that he was thought to be in the so-called typhoid condition, and the opinion was entertained that it might possibly be a case of latent typhoid fever. Indeed, he was so drowsy that we could not get any account of his illness, and this added much to the difficulty. Watching the man, we found that there was not the least evidence of typhoid fever. There were no spots, no diarrhœa, and the splenic dulness extended only slightly below the margin of the ribs. The peculiarity of this case is that while, almost from the beginning, the temperature has been between 98° and 99°, and the pulse extremely feeble, he was dull, his pupils somewhat dilated, and he was extremely delirious. He could not sleep at night, and the only sleep obtained was by the use of small doses of chloral. This, with the prostrated condition, suggested the possibility of typhoid fever. As his mental condition improved, it became clear that this was not the case. He told us that he had had symptoms of coryza, pain in the bones, and all the symptoms of the prevailing epidemic.

Let us see what his condition is to-day. He, too, has a weak first sound, but not so weak as in the preceding case. He has a compressible pulse, moderately weak. The lungs are clearer. He has had no cough since admission and the mind is clear. I think that this is an undoubted case of influenza.

What I desire particularly to call your attention to is the violent and persistent delirium which was present, and the manner in which it was relieved. When I first saw the man I was struck with the sluggish, dilated pupil; the feeble pulse, and the extreme delirium, with a temperature which was normal or slightly subnormal. It at once occurred to me that here was a case of delirium from inanition. This I have seen more than once at the end of an attack of typhoid fever, or any other depressing disorder interfering with nutrition, such as cancer of the stomach, where the brain is disturbed because it does not get a proper amount of stimulus of blood. I had the man placed on liberal supply of food given at short intervals and associated with stimulants, and in twenty-four hours the delirium had passed away. It was clearly a case of delirium from inanition. Do not misunderstand me. Do not suppose that this is a specific delirium. As I have said, I have seen this delirium in other typhoid conditions, using this term in a wide sense, as a result of the brain being illy supplied with its proper stimulation of blood. The man is now convalescent, and simply requires a chalybeate tonic. We shall give him five grains of tartrate of iron and potassium three times daily. The stimulation with a liberal supply of food will be continued.

Leaving these cases, I shall make some general remarks upon this disease, to which, for some absurd reason, we have applied the French name "la grippe," which means nothing so far as the disease is concerned. Influenza or catarrhal fever, as is illustrated by these cases and many others that I have lately seen, almost invariably begins acutely. Nearly all of the cases that I have met with started suddenly in persons previously in good health. One case came under my notice where a physician was so abruptly seized with pain in the back that he had to lie down on a bed, and with difficulty could leave the house. In other instances, not quite so marked, the severity of the pain in the back has been great and has been the first manifestation of the disease. The pain is often referred to the middle of the back in the dorsal region, and it is quite commonly observed that starting in this position it spreads downward into the legs. As described to me, the pain is at times sharp, with a dull pain persisting. The patient is never free from pain, which occasionally rises into acute exacerbations. While many of the cases begin with pain in the back, they soon have pain in the bones followed by headache and moderate fever, and then there are or are not catarrhal symptoms.

I have partly traced the development of the disease in these patients; let us now pay some attention to the character of the fever with which these painful sensations soon become associated. In the majority of instances the fever is moderate and lasts about three or four days. The fever is at its height in from twenty-four to thirty-six hours; then it slowly subsides, and the temperature may go below normal. In one case, it passed to 96° and there was profuse sweating, something like a crisis taking place. During the period of highest temperature lasting thirty-six or possibly forty-eight hours, there is only the ordinary variation of about one degree between the morning and evening temperatures. There is really a slight continued fever, and not a fever with remissions and exacerbations as in malarial fever. As a rule, the temperature does not exceed 103°; but, by way of variety, I have in this epidemic encountered a few cases in which the temperature at the onset unexpectedly shot up to 105° and the next day went down to about 100°, and then the case ran the ordinary course, terminating in recovery. In two of these cases bloody sputum or pure blood was at first expectorated.

With the fever we have the ordinary concomitants; high colored urine of a high specific gravity, without albumin. In one of the cases before you there is a trace of albumin in the urine, but as the man is of rather intemperate habits, it is a question whether it does not belong to the individual rather than to the disease.

Another peculiarity about the disease is the occurrence of catarrhal symptoms in the eyes and nose with cough, which is frequently laryngeal rather than bronchial. These catarrhal symptoms are, however, often absent. Some of the worst cases that I have seen have had no catarrhal symptoms whatever in the eyes, throat, or anywhere else. When the catarrhal symptoms are present they are more apt to involve the eyes, nose, throat, and larynx, than the bronchial tubes, although a fair proportion of cases have catarrhal bronchial râles, and some have even congestion of the lungs, as illustrated by the cases before you. In a few instances epistaxis comes on, and with the occurrence of high fever and debility you are irresistibly made to think of beginning typhoid.

One of the most singular features of the present epidemic is the prevalence of the nervous symptoms. As I have stated, I have passed through other epidemics of catarrhal fever, but this one seems to be stamped by the prominence of the nervous symptoms. These are shown by the violent headache, the severe pain all over the body, the pain in the spine travelling downward, and also by what I have seen in quite a number of cases, hyperæsthesia or general sensitiveness of the surface. This is something more than what might be attributed to the efforts of coughing. Then, too, in some of the

cases, there is delirium, not simply the delirium of inanition, as occurred in one of the cases before you, but a delirium with violent headache, this delirium sometimes taking strange forms. In one case, that of a most refined lady, who when well would hardly recognize an oath, when she became delirious from an attack of influenza, swore at her doctor every time he entered the room. I have been told of instances in which patients have lost their minds from the violence of the headache and the delirium. Besides the delirium, there are in some cases convulsions. About a week ago, I was called by Dr. Rosenthal to see a young man who, while in perfect health, was seized with violent headache, severe pain in the back, pain in the limbs, slight catarrhal symptoms, considerable congestion of the lungs, but no pneumonia. Almost from the onset he had spasms in the arms.

The spasms were most marked in the left arm, although the right was also affected. He was very restless, and slightly delirious, but not markedly so. His temperature, almost from the beginning, was 97°. I found him with pupils somewhat dilated and head slightly rigid, and the presence of cerebro-spinal fever at once suggested itself; but further investigation showed that this was not the case. There was no eruption; the spasms were limited to the arms; there was congestion of the lungs; and, above all, there was no fever, the temperature remaining about 97°. The only thing that gave any relief from the spasms was chloral. Notwithstanding the fact that atropine and opium were used hypodermically this patient gradually sank under the violence of the disease. I know of one case in which paralysis of the lower extremities has followed influenza. It is slowly yielding, and the patient will recover. This case had a marked history of a preceding attack of influenza. I know of several others in which convulsions occurred. The kind of cases I have just mentioned have probably given rise to the idea with some that cerebro-spinal fever and influenza are the same disease. The prostrating influence of the malady on the nervous system is also shown by the fact that patients often stagger on getting out of bed. A prominent lawyer whom I recently attended, thinking that, as he was compelled to remain in the house, it would be a good time to get up his work, sent for his papers, but a few minutes' attempt cured him of this idea and he was glad to lie down. This debility remains for a long time, and is often associated with considerable sweating. The pains often remain, and do not necessarily pass away on the subsidence of the rather short fever. In some cases profuse and persistent sweating is also very common during convalescence, and the patient looks anæmic and miserable. I have seen the knee-jerk absent at the height of the malady, but in the majority it is preserved. Cramps in both calves and shoulders, as well as in the chest muscles, have been reported to me by a physician as happening after the febrile stage had passed.

The main *complication* of ordinary catarrhal fever is, as you know, pneumonia, or what is called pneumonia. Looking over the records of boards of health of different cities, it will be found that the deaths from pneumonia have nearly doubled. What is called pneumonia must therefore be set down as one of the chief complications. You notice that I say "what is called pneumonia." A great many of these cases are simply heavily congested lungs, with great debility, the lungs seeming to collapse. There does not seem to be a true process of pneumonic exudation. While in many cases there is slight dulness on percussion, yet it is not absolute, and the high-pitched bronchial breathing of croupous pneumonia is found in only a few instances. There is no consolidation. This has been the characteristic in most of the cases that we call pneumonia. It is probably proper to speak of these cases as pneumonia, but I want you to bear in mind the difference between this condition and ordinary croupous pneumonia.

Let me call attention to another peculiarity that I have noticed in a large number of instances. A great many persons when seized, and often during the height of the attack, complain of violent pain in the left side, but I have not found any friction sounds, save in one instance, and this may have been accidental. There is want of expansion of the lower part of the lung, usually on the left side, associated with this violent and persistent pain, which makes the patient think that he has pneumonia or some other grave condition of the lung.

We know nothing of the cause of this disease. It is epidemic, and I think myself that it is feebly contagious. It would be an admirable thing if some of our over-filled treasury could flow into the channels of science, and that a commission be appointed to investigate this disease bacteriologically and chemically. We accept the microbic nature of its origin, but it has not been proven.

The prognosis is favorable, but the general mortality is increased by the epidemic. This is because persons previously diseased are carried off. For instance, in these two cases with feeble heart, if any unusual exertion were made the patients would probably die. If an elderly person with fatty heart contracts this disease, for it is no respector of age, he would be in imminent danger. We call this heart failure, but these hearts are diseased and enfeebled still more by the malady. In the two cases before you, I think from the previous condition of the patients and their age that there was no feeble heart prior to the present illness.

I have mentioned relapse. I have seen few distinct examples of this. One was that of a lady who had her first attack in the country and came to town to break it up. She was well for two weeks when she was attacked the second time. Another case was that of a gentleman who was suddenly seized with the relapse while in church, two weeks after the first attack. In a third case pneumonia occurred in the relapse. The longest interval I have known was two weeks, the shortest five days. To prevent relapse, great care is necessary in not going back to work too soon, and not exposing one's self to wet and cold, and with this there should be a judicious use of tonics, and even of stimulants.

Now, a few words in conclusion with reference to the treatment. The treatment must, of course, be the ordinary treatment of catarrhal affections. For the relaxed and irritated throat I have found nothing so serviceable as a gargle of salicylate of sodium, glycerin, and water. For the nasal catarrh, which at times is very unpleasant, I have found that a two per cent. solution of cocaine does the most good. The bronchial catarrh should be treated as any other bronchial catarrh, according to the exact seat and the number of râles. A good deal of the paroxysmal cough is laryngeal, and you will find that small doses of opium at night, or bromide and

opium, or what I have employed in a number of cases, broken doses of Dover's powder, will give good results. One-fourth of a grain of codeine, repeated according to the circumstances of the case, is often useful; it allays the cough, induces sleep, and does not cause much sweating. Let me say here, that while perhaps the routine practice of using diaphoretics in these cases is useful, yet such drugs must be used with judgment. In some cases there is a great tendency to sweating, and you do not want to increase it, as it rather adds to the debility. The diaphoretic must be adapted to the individual case, not employed too actively, and not at all where sweating is a prominent symptom.

The debility must be borne in mind, and it is good practice to give sulphate of cinchonidine or quinine, ten or twelve grains daily. Nourishment should be kept up, and the action of the bowels looked after. The patient should not be overpurged, for, in some instances, diarrhœa is associated with the malady.

For the headache and the pain in the bones I have found two remedies of especial advantage. One is antipyrin in five-grain doses, with a grain or two of quinine to prevent depression, repeated every two or three hours until the headache is relieved; the other is phenacetin in five-grain doses. In one instance where these two drugs failed to relieve the headache I found gelsemium to answer.

The general strength and the circulation must be looked after, and especially during convalescence the patient must receive nutritious food, alcohol, small doses of strychnine, and, later, iron.

I shall not speak of the treatment of the complication pneumonia, but let me point out, in concluding these remarks, that you should keep your patients for a long time on tonics which may prevent relapse, and, indeed, it may be a question whether it would not be advisable when the disease makes its appearance in a household to place the whole family on the use of tonics, such as cinchonidine or quinine, as a preventive. My experience is that while this will not ward off the disease, it renders the attack less severe.

I have made these cases an opportunity to lecture to you upon the prevailing epidemic, and I trust that the illustrations that I have given will serve to enforce the lessons laid down and leave a clear picture of the affection upon your minds.

ORIGINAL ARTICLES.

ON THE CHOICE OF METHODS IN THE TREATMENT OF UTERINE CANCER.

BY REEVES JACKSON, A.M., M.D.,
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IT is now very generally believed that cancer of the uterus is a local disease, and that at some stage of its existence it may be permanently removed. Likewise, it is understood that the curable period in the history of the disease is usually a very early one, and that the most favorable time for operative measures has very frequently passed before the presence of the disease is known or its nature recognized. Equally true with these propositions is a third—namely, that in order to effect a permanent cure the removal of the disease must be complete. If any portion be permitted to remain, recurrence will surely manifest itself.

The modern methods by which the removal of uterine cancer is essayed are chiefly three in number, as follows:

1. Amputation or excision of the diseased structures by knife, scissors, or curette.
2. Actual or chemical cauterization.
3. Extirpation of the entire uterus.

The first and second of these methods may, of course, be variously combined.

I desire to discuss and compare these plans with the view of determining the question: which of them should be preferred for the radical treatment of cancer of the uterus?

If the theory of local origin and limitation upon which all of these methods are based be true, it would seem unimportant, so far as permanency of result is concerned, which method be chosen, the only essential factor being thoroughness of removal; and the operator might feel at liberty to choose the method which sufficiently abundant experience may have shown to be the safer in immediate result. And why not?

For various reasons known to themselves certain operators have given preference apparently to one of the above mentioned methods, and adopted it to the entire or comparative exclusion of the others; and, as a result, we are now in possession of a sufficiently large number of observations, extending over a sufficient length of time to enable us, with a fair degree of accuracy, to estimate properly the relative value of the methods in question in respect to their immediate mortality and their remote results—the latter as bearing especially upon the all-important question of recurrence or reappearance of the disease.

Partial Removal of the Uterus.—In 1882 Dr. W. H. Baker, of Boston, reported the results of high amputation performed in twelve cases of cancer of the uterus, in which it was hoped the entire disease could be removed.[1] No death occurred from the operation. In one case the disease returned after two months, death occurring in seven months. In another the disease returned almost immediately, and death took place in fifteen months. A third died three months after the operation. In a fourth recurrence took place nine months after operation: date of death not stated. In 1888, at the meeting of the American Gynecological Society, Dr. Baker stated that five of these women were living and well at periods of from six to ten years after the operation.

At the same meeting Dr. Thaddeus A. Reamy[2]

[1] American Journal of Obstetrics, 1882, p. 265.
[2] Transactions, 1888, p. 185.

reported the results which he had obtained by amputation in 55 cases. These were selected from about 300 cases of uterine cancer of all grades, because of the apparent possibility in them of entirely removing the diseased structures. There were two deaths—a mortality of 3 6 per cent.

From Dr. Reamy's report it appears that in 2 of the cases the ultimate result was unknown; in 14 there was recurrence of the disease within one year and subsequent death; in 8 there was recurrence in two years; in 4 there was recurrence at periods varying from two to four years. In 20 there was no recurrence, the periods of immunity being from two to eight years, and 2 of the patients included in the number died from other causes. Of the entire number, 3 others died from other causes, and free from recurrence of cancer, at twelve, thirteen, and fourteen months respectively after operation.

In the *Annals of Gynecology*, January, 1889, Verneuil records his experience with this method of treatment. His cases were 22 in number. There were 2 deaths. In 9 of the cases there was recurrence of cancer in the cervix, while in 12 the cervix remained free from disease, although 1 of the patients was under observation for seven years. Verneuil classifies his cases into two series, the first series embracing the cases operated upon down to the end of 1884, being 17 in number, and the second series including those operated upon since 1884, 5 in number. The average length of life after operation in the first series was twenty-three months, and in the second twenty-nine months.

In 1887 Hofmeier published a table of 96 cases in which partial amputation was done at Berlin. The mortality was 7.4 per cent.; 19 of these patients were living at the end of four years after operation.

Since March, 1882, I have performed partial amputation of the uterus for cancer in 30 cases. Two deaths resulted directly from the operation—a mortality of 6.6 per cent. Of the 28 who recovered 11 are living and were in good health very recently. The periods which have elapsed since the date of the operation in these cases are as follows: In 1 six years and three months; 1 five years and nine months; 3 over four years; 1 over three years; 3 over two and a half years. In addition to the foregoing 2 others are living, but as the operations were made upon them less than two years ago, I have not included them.

Some of the cases are embodied in this report only for their bearing on the question of immediate mortality, the disease having been so far advanced

TABLE SHOWING THE RESULTS IN THIRTY CASES OF HIGH AMPUTATION OF THE UTERUS FOR CANCER.

No	Initials of patient's name.	Residence.	Age.	Date of operation.	Result.	REMARKS.
1	R. M.	Englewood, Ill.	41	March 17, 1882	D.	Death on sixth day.
2	K. M.	Chicago	45	April 17, 1883	R.	Died eight months after, from recurrence of disease.
3	S. M.	Chicago	45	June 16, 1883	R.	Recurrence in four months. Date of death not known.
4	N. A. L.	Ottawa, Ill.	32	August 15, 1883	R.	Had a child two years later. Alive and well in October, 1889, six years and two months after operation.
5	M. S.		54	Jan. 29, 1884	R.	Was "perfectly well" June, 1887, three years and seven months after operation. No later history.
6	T. Y.	Chicago	41	Feb. 6, 1884	R.	No symptoms of recurrence Nov. 1, 1889, five years and nine months.
7	G. M.	Chicago	57	April 12, 1884	R.	Recurrence in eleven months; death in fifteen months.
8	L. G.	Chicago	26	April 14, 1884	R.	Recurrence in two months; death in four months.
9	O. S.	Chicago	41	May 25, 1884	D.	Death on fifth day.
10	J. M.	Mattoon, Ill.	38	May 5, 1885	R.	Disease recurred in parametria. Death four and a half months after operation.
11	A. M.	Chicago	48	May 30, 1885	R.	No recurrence. Health good August, 1889, four years and three months after operation.
12	H. H.	Chicago	72	June 17, 1885	R.	Subsequent history unknown.
13	M. W.	Dubuque, Ia.	50	Sept. 23, 1885	R.	No return; health good four years and two months after operation.
14	M. J.	Chicago	40	Nov. 25, 1885	R.	Well and free from recurrence four years after.
15	R. M.	Leavenworth, Kansas	50	Dec. 2, 1885	R.	Well February 11, 1886; no later report.
16	L. H.	Chicago	47	May 8, 1886	R.	Recurrence in five months; death in eight months.
17	A. C.	Chicago	51	June 24, 1886	R.	Death in nine months from recurrence.
18	R. L.	Dubuque, Ia.	64	Oct. 23, 1886	R.	No recurrence three years after.
19	E W.	Aurora, Ill.	50	Feb. 14, 1887	R.	No recurrence Nov. 1889, two years and nine months.
20	R. S.	Chicago	40	Feb. 22, 1887	R.	Well and free from return at end of two years and eight months.
21	J. L.	Chicago	38	March 10, 1887	R.	No return. Health good two years and seven months later.
22	E L. T.	Walkerton, Ind.	42	Dec. 21, 1887	R.	Recurrence in four months; date of death unknown.
23	E. K.	Chicago	40	April 30, 1888	R.	Recurrence and death in six months.
24	I. J.	Chicago	64	May 3, 1888	R.	No recurrence in Sept. 1889, one year and three months.
25	A. E. W.	Oskaloosa, Ia.	57	May 22, 1888	R.	Died three months later.
26	M. M.	Fort Wayne, Ind.	54	July 14, 1888	R.	Recurrence and death nine months later.
27	J. H.	Evanston, Ill.	55	May 17, 1889	R.	Disease not all removed; symptoms continue.
28	E. J.	Chicago	42	July 29, 1889	R.	Symptoms of recurrence at four months.
29	E. P.	Chicago	49	Oct. 29, 1889	R.	Too soon to know remote result.
30	L. M. W.	Waverley, Ia.	65	Nov. 8, 1889	R.	Too soon to know remote result.

at the time of operation as to render it certain that the affected tissues could not be safely removed, and in which amputation with accompanying or subsequent curetting or cauterization was used only as the most efficient means of palliation. Such cases were Nos. 1, 3, 8, 16, 22, 25, and 26 of the table. Deducting these 7 and the 2 deaths, 9 in all, from the entire number, it leaves 21 from which to compute the ultimate result of the operation. As already stated, 9 of these are alive and well, from two and a half to more than six years after operation.

From the foregoing table it will be observed that the earliest period in which symptoms of recurrence appeared after operation was four weeks, in a single case, and I am quite sure I did not in that instance remove all of the disease. Indeed, in very many cases—I think I may say all—it is impossible to know in advance of, or during, an operation the extent of cancerous involvement, and hence it is equally impossible to know, except through lapse of time, whether an operation will be or has been radical. And this applies to all operative methods. Whenever symptoms of so-called recurrence are manifested within a few months after an operation, it may very generally be accepted that the fact indicates a continuance rather than a recurrence, and that the disease in such cases has only been partially removed. But while this inability to define the anatomical limits of cancer must always affect the prognosis of an operation, it should not deter from an attempt at removal of the disease in any case in which removal may seem feasible; and it should admonish us to be as thorough in operating as may be consistent with the immediate safety of the patient.

Cauterization.—In *The Lancet* of August 2, 1884, there was published an abstract of a report made by Pawlik of 136 cases of cancer of the cervix which had been treated, at Vienna, by means of the galvano-cautery. The report embraced a period of twenty-three years. Of the entire number, 10 died soon after the operation, making a mortality of 6.6 per cent. Of the 126 survivors, 33 were in good health and free from recurrence at periods varying from two to twenty-one years.

At the annual meeting of the American Gynecological Society, held at Boston in September, 1889, Dr. John Byrne, of Brooklyn, read a paper embodying a report of 367 cases of uterine cancer treated by the galvano-cautery, the observations extending over a period of twenty years. The cases being classified according to the portion of the organ affected, the vaginal portion of the cervix was involved in 59, the entire cervix in 81, both cervix and body in 219, the body alone in 8. The mortality of the operation was *less than 1 per cent.* The period of exemption from recurrence varied greatly according to the anatomical seat of the disease, being greatest in those cases in which it was confined to the vaginal portion of the cervix, and least in those in which the corpus was alone involved. In 36 cases of the former which were kept under observation, the average period of freedom from return was eight years and seven months, 30 remaining well over five years. In the 8 cases in which the corpus was alone diseased, the average period of exemption was two years. In more than one-half of the entire number of cases treated there was freedom from symptomatic return for from three to eighteen years.

Hysterectomy.—The removal of the entire uterus for cancer has been performed probably not less than 1200 to 1500 times. At first the organ was removed by laparotomy, but the operation was attended by such a frightful mortality—not less than seventy-two per cent.—that it is no longer done when the vaginal method is feasible, the latter being vastly safer. Dr. Sarah E. Post has compiled some extremely valuable statistics bearing upon this point. In the *American Journal of Obstetrics* for 1887, she published a table comprising 722 cases, and showed that the mortality of the operation was twenty-four per cent.; and, although the statement that the death-rate is steadily diminishing is probably true as applied to a few operators who have had exceptionally large experience, it is hardly true concerning the great mass of operators. Indeed, I have no doubt that if all the cases were published, it would appear that the mortality of the operation is now, and always has been, considerably over thirty per cent. But, accepting the published statistics as correct, the mortality of hysterectomy, as compared with partial amputation, is four or five times greater, and as compared with cauterization, eight or ten times greater. However, the advocates of hysterectomy claim that, as a compensation for this greater death-rate, the disease is much more likely to be wholly removed, and thus freedom from recurrence, and prolongation of life more certainly secured. The apparent reasonableness of this claim cannot be denied, but, unfortunately, observed facts, now in great number, show conclusively its fallacious character. For example, in 1886, Dr. Post presented a table showing the results of 137 cases; 40 of the patients died—mortality 29 per cent. Of the 97 survivors, only 18 were alive at the end of eighteen months to two years. In Pawlik's 136 cases—one less in number—with a mortality of 10, there were 33 alive and well at from two to twenty-one years. Hofmeier, in the report already referred to, of 96 cases of partial amputation, compared the late results with those in 33 cases in which the entire organ was removed. While 19 of those in whom partial am-

putation had been done were alive at the end of four years, all the others were dead. In Fritsch's 60 cases, with 7 deaths, only 2 were alive after three years. Terrier has recently reported 18 cases. There were 4 immediate deaths; in 3 cases the disease could not be removed, and of the 11 who recovered, only 4 were free from recurrence at the end of two years.

At the last International Medical Congress Martin reported the subsequent histories of 214 women who had survived the operation. Of these, Leopold had 42, Schroeder 46, Fritsch 60, and Martin 66. Of all this number only 5 were alive after four years. Hence, we may say that the successful removal of a cancerous uterus is a very different thing from the successful removal of a uterine cancer.

Having considered the relations which each of the three prominent methods of dealing with cancer of the uterus sustains to the questions of immediate mortality and remote results, it is not difficult to fix their status.

Partial amputation is doubtless a beneficial procedure. With a low rate of mortality, probably not exceeding 5 or 6 per cent., it has in many cases removed the disease permanently, and in others stayed its progress and prolonged life.

In a still greater degree actual cauterization has been shown to be potent for good. The recently published results obtained by Dr. Byrne are wholly without parallel, both in the extremely low death-rate and the greatly prolonged immunity from disease. Dr. Byrne's report is unquestionably by far the most favorable showing that has ever been made concerning any method of treatment for uterine cancer in any considerable number of cases; and as such it distinctly challenges our consideration.

Hysterectomy is a ghastly failure. Not only has it given worse results, both immediate and remote, than other methods of treatment for cancer of the uterus, but I affirm that it is worse than no treatment at all. A hundred women with uterine cancer will live a greater aggregate of years if left alone than if subjected to hysterectomy.

And now, as candid physicians with an honest appreciation of the duties we owe to our patients who place their trust in our integrity as well as in our skill; as men and women willing to be guided by the logic of facts rather than by our predilections or falsely found preferences, what should be our attitude in this matter? If we desire to secure the best interests of a patient suffering with uterine cancer, what method of treatment should we choose for her? Should it be one which with the least risk promises the greatest length of life? or, one which with the greater risk promises the shorter period of immunity from disease and death?

BORIC ACID AND ALCOHOL IN THE TREATMENT OF ACNE.

BY SARAH E. POST, M.D.,
OF NEW YORK.

THE suggestion of this plan of treatment was derived from Dr. Lowenberg's report before the International Congress, at Washington, in regard to its efficacy in the treatment of boils. Dr. Lowenberg based his practice upon the following assumptions:

1. Boils are caused by an affection from without—viz., through the ducts of the cutaneous follicles.

2. The successive outbreak of furuncles on the same individual takes place by auto-contagion—that is, through transportation of the cocci upon the skin.

3. Infection from one person to another is possible, and originates from the same process as No. 2.

It then occurred to me that if in a case of extensive local papillary disturbance of nutrition (carbuncle) infection from without had been distinctly proved, it might be logically inferred in the smaller papillary disturbance (boil); further, that if a middle-sized papillary disturbance of nutrition (boil) were due to infection from without, the same might be just as logically inferred for the still smaller local papillary disturbances called pimples or acne.

Arguments in support of this deduction immediately sprang up. Acne often complicates atrophic rhinitis. The discharge in atrophic rhinitis has often the most offensive character, and particles of this discharge may easily be deposited upon the skin. Again, acne often complicates dyspepsia, in which the breath is also loaded with decaying material. If follicular pharyngitis may be produced directly by the irritation of such air, why not also follicular inflammation of the skin? Acne complicates genital irregularities, and it is not impossible that irritating secretions may be carried from these parts to the face.

Another argument is the fact that the sufferer from acne vulgaris has, without exception, an oily skin. He or she is a person to whom everything in the line of dust sticks. There are people whose skin is always clean. They do not bathe more than others, yet they can go through the dirtiest places without being soiled. Such people do not have acne.

Acne is a disease of adolescence. After the beard grows, men do not have acne, and it is quite clear that the beard protects the follicles from the intrusion of foreign particles. Old people, in whom the glands are less active, do not have acne.

However, the truth or falsity of these arguments will in no degree affect the success of the remedy which is here recommended. I commenced using

the boric acid solution for acne in 1887, in the Evening Class for Working Women in the Demilt Dispensary, of New York. The class included, at that time, all varieties of disease.

During 1886 the number thus making application for treatment was 379, of which 6, or 1.6 per cent., were cases of acne. During 1887 the whole number of new cases was 525, of which 10, or 1.9 per cent., were cases of acne. During the latter part of this year the boric acid treatment commenced to be used. During 1888 the whole number of new cases was 552, and of this number 28, or 5.1 per cent., were cases of acne. The increased number of acne cases during this year was clearly due to the success of the medication, for these new cases were, as a rule, introduced by those who had already been successfully treated for the disease. At the beginning of the present year the class had outgrown its accommodations and was divided, so that the comparison could be carried no further.

The directions for treatment were as follows: Bathe the face at night in hot water containing a few drops of ammonia; do not use soap. Rinse the face in cold water. Dry the face. Then apply the solution, sopping it on with the corner of the handkerchief or soft, clean rag. In the morning do not wash the face, but apply the solution. Carry the solution with you, and apply it several times a day if the skin becomes moist.

In very bad cases it was my custom to apply a little ether and remove the comedones with the extractor at the time of the visit. Within a week great improvement would be obtained.

Unlike most applications to the skin, the boric acid solution forms an elegant toilet preparation, as it deposits a delicate powder which is scarcely perceptible, and yet serves to remove the "shine" from the face. I think that men, with their covered faces, scarcely realize the necessity of women for some form of face powder, especially the woman whose face is flushed with household work. It has occurred to me that the alcohol might be the active agent in the cure of acne, but without the powder which it carries the alcohol would not be tolerated, as it leaves a glistening surface on the skin.

The solution which I use consists of half an ounce of boric acid in eight ounces of alcohol, to which perfume may be added, if desired.

INDIVIDUALITY THE BASIS OF RATIONAL CLIMATO-THERAPY.[1]

BY G. E. ABBOT, PH.D., M.D.,
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IT is of frequent occurrence that known diseases are subjected to imperfectly understood climatic treatment—important conditions and relations being overlooked in superficial advice, or lost in too much generalization. So with the common error of ascribing to climate, disturbances which are incident either to acclimatization, erroneous treatment, or the patient's carelessness. If it were not for these avoidable mistakes of judgment, a systematic differentiation of climates long since might have been made.

The Climato-therapy of to-day deals largely in speculation and experimentation, but a more careful attention to conditions in their relation to results will tend largely to relieve this department of practice of its present uncertainty. The demonstrated or accepted facts of physiology, meteorology, and climatology can be known, and utilized by a common-sense application to the needs of the patient. The treatment of classified disease by classified climate is as brilliant as routine bedside practice; each case must stand alone, and the practitioner learns that success depends upon the ready appreciation of a something called individuality, and the comprehension of its subtle influence in modifying the disease and remedy as observed in the case under treatment.

Believing that the principle of individuation is applicable to all the factors involved in a given case, we define the basis of rational Climato-therapy to be, *the certain knowledge of the individuality of physician, patient, and climate.* This knowledge is intuitive and discursive; and the notion of such individuality implies an innate power of discrimination, as well as careful comparative study. Otherwise expressed—the physician, appreciating the personal equation, must realize the importance, and conceive of the reality of the patient and the climate which marks all the others with a difference and constitutes the one under consideration.

The following, purely suggestive in character, may serve to convey approximately an idea of the difficulties attendant upon drawing inferences as to treatment.

Certain rudiments of meteorology and meteorological observations are involved in Climato-therapy. In daily thermometric readings we note that, on mountains the daily maximum comes earlier than on plains or in valleys.—The greatest differences in amplitude are in the strata next the ground.—The air above a convex surface is warmer in winter and at night, it is also cooler in summer and during the day; and the yearly as well as the daily amplitude is less than upon a concave surface.—The daily amplitude on high elevations and in high valleys is often greater than in low-lying plains, depressions, or deep valleys.—Height in itself does not decrease the amplitude.

With small daily changes in absolute, the relative humidity decreases during increasing temperature, and increases during decreasing temperature; *i. e.*,

[1] Read before the American Climatological Association, June, 1889.

where the daily amplitude is great. The daily change in relative, is more important than that in absolute humidity. In mountain regions, the daily period of the absolute, as well as of the relative humidity is complex; and differs from that of the plains in having a smaller daily amplitude, depending upon the small temperature amplitude and upon moist currents. In elevated valleys, the daily relative humidity amplitude may be greater than in lower valleys, as is the case with the temperature amplitude.

In climatology and climato-therapy it should be remembered that a climate geographically severe, is rendered relatively mild by topographical and local conditions: that the climate of convex surfaces is influenced more by relative elevation and form of surface, than by absolute height: that the rapidity of vapor formation on mountains is increased by lower pressure, and lessened by the general greater relative humidity, as on plains when the relative amount of vapor is smaller and the barometric pressure is greater; and that low barometer, with high relative humidity, often equals high barometer with low relative humidity in its climatic effects.

Single climatic factors have slight purport; averages mean little unless correctly associated. The first practical question to arise is, The temperature of which air shall be measured? One is of climatological, the other of medical import. Then we should know, not so much the absolute as the relative temperature;—not so much the yearly mean, as the mean winter temperature, and the maximum and minimum of the day and of the month; and also the number of hours of the lowest as well as of the highest temperature in every day in each month.

In regard to rain we require, not the mean or total fall, but the mean monthly fall expressed in percentage of the yearly amount; the quantity of rain and the average number of hours of rain per rainy day. With cloudiness it is necessary to know the mean duration of sunshine, expressed in hours per mean day of the month, and its relation to the possible sunshine. The humidity of a locality is unknown, unless the mean in one of the coldest as well as warmest hours of the day is given; and important as is the actual saturation deficiency, still more so is the sensible deficiency in saturation, *i. e.*, the difference between the actual relative humidity of the air at a given temperature, and that necessary to saturate it, were the temperature 98.5° F., is the sensible relative humidity.

The actual velocity of the wind is not so important as its relative, *i. e.*, its sensible velocity; the saturation deficiency and the velocity of the wind determining the evaporation. The effect of these factors on a given absolute temperature is equal, according to Smart, to a calculated degree of calm, dry cold, *i. e.*, the sensible temperature.

The benefit accruing from climatic warmth has its limitations. It may retard the progress of diseases of the lungs, but more probably the improvement depends upon conditions in the case of the patient. An equable temperature, with considerable moisture, exerts untoward local and general influences; while changes in humidity or velocity of winds are more trying than variability in temperature. In general, warm, humid climates are sedatives, dry climates stimulants; yet either continued taxes the nervous system. Since "life points to a change in phases of rest and excitement," variations, within certain limits, probably favor the important functions of life more than relative uniformity.

Improvement due to mountain climate comes not from, but in spite of, the rarefied air, and depends upon its aseptic qualities, strong winds, and an atmosphere in which exercise can be taken at all seasons. Improvement due to ocean climate comes from the antiseptic qualities of the air, the smaller difference between day and night, sun and shade, greater protection from chilling influences, and less demand for muscular activity to compensate heat-loss. In the former, the rarefied air expands the lungs, thereby compensating the pressures and facilitating the blood-flow; in the latter, the high pressure accumulates in the lungs the greatly increased amount of oxygen in the air, while the small quantity of carbonic acid present promotes the carbonic acid exhalation. Sea climate increases appetite, bodily weight, excretion of urea and feces, and decreases uric and phosphoric acid excretions; while in mountain climates there is less demand made upon the organs of assimilation, the appetite despite exercise is moderate, the excretion of urine and feces rather decreased, and there is little or no bodily increase. Both climates give equally good results in the same disease; and each, in patients with marked differences in degree of vitality—why? Individuality.

The more closely Climato-therapy is studied, the more evident it becomes that successful treatment depends less upon the absolute, than upon the relative conditions of climate; less upon the critically differentiated disease than upon the patient—his physiological resistance, recuperative power, and environment; less upon the physical factors than upon the individualities of both patient and climate. An opinion in Climato-therapy presupposes an intimate acquaintance with all the factors entering into any one case—of these, Individuality is essentially preëminent.

CLINICAL MEMORANDA.

ANATOMICAL.

The Remedy for the Annual Scarcity of Dissecting Material.—At this time of the year there is a periodical scarcity of human bodies for the study of practical anatomy and operative surgery in our medical colleges. It seems strange to me that the annual deficit has never been

met by the simple and perfectly satisfactory device of using the bodies of dogs and cats for such purposes.

It is well known to all of us who have been taught anatomy and surgery, that very nearly fifty per cent. of the dissecting material supplied to students is ruthlessly wasted. Subjects are constantly allowed to dry up or decay by careless and indolent students, while other members of the class are anxiously waiting to have parts assigned to them. The beginner in dissecting very often wastes material from ignorant use of the scalpel; the older student does the same because of his haste to study only nerves, vessels, and viscera.

The principal values of dissection are to teach the first-year student the use of the scalpel and forceps; the appearance of muscle, fascia, artery, and nerve, and the location of the larger viscera. This could be done as well on the body of a dog or cat as on a human cadaver; and at probably one-tenth the expense. Again, the classes in operative surgery are taught, as a first step, to make cutaneous incisions and to insert sutures. Certainly these proceedings are readily learned on the shaved trunk of one of the lower animals. In fact, many of the more important operations could be taught as well, or almost as well, as these. Trephining, resection of bone, excision of testicle, suture of intestine, intestinal anastomosis, excision of the eye, tenotomy, etc., are perfectly demonstrable on the lower animals.

After a course of this kind in certain classes, the students could be put to work on human structures, when it would be found that their trained hands and thoughtful brains would make good use of the opportunity given to study higher anatomy and operative surgery.

This method would be valuable also in giving them some insight into comparative anatomy, of which many of us know so little. It would be a sort of unconscious biological training of no mean import.

It is understood, of course, that I do not mean to practise vivisection in this uncontrolled manner; but to do this work upon dead animals obtained from the dog-pound of the city; if necessary, inferior grades of animals could even be bred for the purpose, as we breed food animals for the slaughter-house. It must, however, be done humanely and scientifically, not brutally.

Students in many schools learn most of their anatomy from books, because of the impossibility of getting human bodies in quantity, and yet an unused wealth of canine anatomical material is always at hand.

JOHN B. ROBERTS, M.D.

HOSPITAL NOTES.

OPERATION FOR DOUBLE OVARIAN TUMOR. ARTHROTOMY OF ELBOW-JOINT. EXCISION OF HIP-JOINT. EXTERNAL URETHROTOMY.

BY CHARLES B. NANCREDE, M.D.,
PROFESSOR OF SURGERY AT THE UNIVERSITY OF MICHIGAN, ANN ARBOR.

OPERATION FOR DOUBLE OVARIAN TUMOR, FOLLOWED BY RECURRENT HEMORRHAGE; RECOVERY.

PROFESSOR NANCREDE called attention to the danger of operating in a general hospital, unless the strictest aseptic precautions were taken. He laid special stress upon the difference between *aseptic* and *antiseptic* surgery, contending that the former was the highest expression of Listerism; that Tait and his school really owed most of their success to the fact that Lister had shown that "something," which adhered chiefly to the patient's person, the surgeon's hands, and his instruments when introduced into the abdominal cavity, caused septic peritonitis, etc. He insisted upon the impropriety of using antiseptics in the abdominal cavity, and told the class that the patient had been prepared for operation by a thorough bath, special attention being paid to cleansing the umbilical depression. The operator also had carefully washed himself. His instruments (solid ones) had all been boiled, as had his ligatures, and the sponges were rendered aseptic. The toilet of the peritoneum would be made with boiled, recently distilled water. No antiseptic would be used, except to wash off the abdominal wall before making the incision, and a pad of antiseptic gauze, wrung dry, placed along the line of incision, as a permanent dressing. The field surrounding that of operation would be protected by towels wrung out of corrosive sublimate solution.

The lecturer then described the course and history of his case, which showed that constant vomiting had existed for nearly seven months, reducing the patient to a state highly unfavorable for operation. The tumor was firmly impacted in the pelvis, causing nearly complete obstruction of the rectum, rendering death only a question of time.

A very long incision was found necessary, and the delivery of the nearly solid tumors was most difficult. Owing to continued oozing, the source of which could not be detected—re-ligation of one pedicle being resorted to—drainage would be instituted, since his rule was, as was Greig Smith's, "When in doubt, drain."[1]

ARTHROTOMY FOR UNREDUCED BACKWARD DISLOCATION OF BOTH BONES OF THE FOREARM.

In this patient a fall, between four and five months ago, had resulted in a dislocation which had not been reduced, it being thought that a fracture of the humerus also existed. Although Professor Nancrede had once reduced a similar displacement at the end of ten weeks, he could not do so in the present case, elbow luxations becoming "ancient" sooner than those of any other joint; indeed, at the end of a month it is often impossible to replace the bones without operation.

Three courses were open in such cases—in the young, arthrotomy; in middle age, excision; in the really old, intentional fracture of the olecranon process under an anæsthetic, and obtaining ankylosis in a good position—a right angle, if a movable joint could not be secured.

Making an incision as if for excision, freeing the ulnar nerve, dividing numerous adhesions, the olecranon was then sawn across, and, after removing a small osseous fragment adherent to and blocking up the trochlear

[1] This proved to be the means of saving the patient's life, for, upon reacting some hours later, severe arterial bleeding occurred; the abdomen was reopened, and, although no distinct bleeding points were detected, the pedicles were re-ligated, it being thought that some vessel had been damaged by the aneurism-needle when perforating the pedicle, or that it contained myomatous tissue, causing it to shrink. The woman recovered, apparently as well as if no second operation had been required.

surface of the humerus, the bones were with great difficulty reduced. Free drainage was instituted, the olecranon wired to the shaft, and the arm put up on an obtuse-angled splint, the Professor stating that the arm would be gradually brought to a right angle or less, as soon as the contractured state of the triceps could be overcome.

EXCISION OF THE HIP-JOINT.

The lecturer called attention to the evils of prolonged bone suppuration, such as amyloid degeneration of the liver, kidneys, and bloodvessels of the intestines, stating that in his experience, for the diarrhœa resulting from the last-named complication, nitrate of silver in appropriate doses had proved most efficacious, although, of course, not curative.

It might be asked, How did he know that the bones composing the coxo-femoral joint *were* involved? The reasons were that the child had latterly waked up frequently in the night with severe pain in the limb, and found himself forcibly grasping and steadying the thigh with both hands—*i. e.*, he had the distinctive "starting pains" of inflammation of the sub-cartilaginous lamellæ of bone, meaning also more or less erosion of the articular cartilages. Doubtless, in addition, under ether, by proper manipulation, the eroded bony surfaces could be brought into apposition, the granulations torn away, and "grating" elicited.

Under full antiseptic precautions, the joint was excised by Heyfelder's incision, which was usually employed by Professor Nancrede, the femur being sawn so as to remove nearly all the trochanter major, to insure free drainage. The upper part of the acetabulum being carious, it was removed with the burr, the wound drained, and put up in *abduction*, both to lessen deformity and the shortening of the limb.

TRAUMATIC STRICTURE; PERINEAL FISTULA; EXTERNAL URETHROTOMY.

The next patient, aged fifteen years, about three years since, while coasting, fell from the sled and struck his perineum on a board imbedded in the ice, containing some projecting nails, which latter divided the urethra, as shown by the urine passing freely from the wound during the next act of micturition. For a few weeks a little urine was passed by the urethra, but after this time none.

After etherization, first a fine probe, then a director, was passed along the fistula, and a sound down to the occluded portion of the urethra, which was at about the position formerly occupied by the bulb. A median incision exposed the point of the sound, which was made to emerge at the perineal wound, and the strictured tissue was freely dilated and divided by the knife. Next, the posterior portion of the urethra was found, freely opened by dissecting down upon the track of the fistula as indicated by the director, and a soft-rubber catheter, stiffened by a stylet, introduced into the bladder, the instrument being guided along the urethra by a broad-grooved hernia director, which, Professor Nancrede stated, was the best instrument for this purpose. He detailed the symptoms of a ruptured urethra, and called attention to the frequency of the accident from falls upon the perineum and from crushes of the pelvis, and warned the class that after such injuries the condition of the bladder must be at once investigated. He further stated that when decided urethral laceration was demonstrated by the passage of blood with a little urine on the first attempt at micturition, followed by total inability to empty the bladder, and the attempt to catheterize failed, owing to the manifest laceration of the urethra, a median perineal incision should be made, the two extremities of the urethra sought, a catheter introduced, and the wound allowed to heal by granulation. Even with an external wound, as in this case, the urethral ends should have been sought and kept in apposition, when the present operation would have been unnecessary. With no external wound, extensive urinary infiltration with gangrene of the cellular tissue, sapræmia, and death commonly results, unless a free perineal incision is promptly made.

MEDICAL PROGRESS.

Amylene Hydrate in Epilepsy.—DR. WILDERMUTH, of Stuttgart, has had very satisfactory results in the treatment of epilepsy with amylene hydrate, particularly in cases with nocturnal paroxysms. His studies included thirty men and thirty-six women suffering from the disease. The amount given was from one to two drachms daily in two or three doses, administered in wine or cider, or in severe cases in smaller doses administered hypodermically. In some cases a continuous sleepiness was observed, which, however, often disappeared after the patient had become accustomed to the drug without lessening the dose. In many cases the anti-epileptic effects continued for six or eight weeks after the drug was discontinued. The author considers amylene hydrate indicated:

1. In cases with frequent convulsions.
2. In severe bromism to control the paroxysms.
3. In nocturnal epilepsy, where it may be alternated with bromides, in recent cases combined with atropine.—*Therapeutische Monatshefte*, December, 1889.

Dr. Dobell's Treatment of Influenza.—In the *British Medical Journal*, December 21, 1889, DR. DOBELL advises that at the beginning of an attack of influenza the patient should go to bed at once and take hot gruel, hot tea, and beef-tea for diet during the more acute state, resuming ordinary solid meals as soon as practicable. The bowels should be kept well open (but not severely purged) by any aperient known to act most kindly with the patient. The use of the following inhalation should be begun immediately:

℞.—Creasote } . of each 1 drachm.
Oil of cloves }
Oil of eucalyptus . . . 1 ounce.
Camphorated tinct. of opium 2 ounces.—M.

Shake well, and add one teaspoonful to three pints of boiling water; wait two minutes to let the hottest steam pass off, and then hold the face well over the vessel, and throw a light handkerchief over the head; shut the eyes, and let the forehead and face be thoroughly exposed to the steam, which should be drawn through the nostrils and blown from the mouth. Continue this as long as steam lasts (about fifteen minutes), and repeat every two hours.

In the interim, gargle occasionally with hot water, and let all the secretions from the nose and throat be ejected. Internally, the following should be administered:

℞.—Spirit of camphor . . . 1 drachm.
Spirit of nitrous ether } of each 1 ounce.
Comp. tinct. of cinch. }

One teaspoonful in water every three hours. If the temperature rises above 101° F., take five grains of antifebrin in two tablespoonfuls of beef-tea, and repeat every hour till the temperature falls to 100°, continuing the inhalations and mixture as before. If pain or oppression of the chest sets in, apply hot poultices. No danger need be apprehended if the above directions are followed in good time. The doses ordered are for persons over twelve years of age, and must, of course, be reduced for those who are younger.

Sozoiodol in the Treatment of Burns.—DR. OSTERMAYER, in the *Deutsche medizinische Wochenschrift*, advocates sozoiodol for the treatment of burns. Like iodoform, it has the property of allaying pain, but in addition it prevents suppuration. It is odorless and perfectly safe. When a burn has been sustained the blisters are opened and the contents removed with sterilized or antiseptic cotton. Immediately a 10 per cent. mixture of sozoiodol in powdered starch or Venetian talc is dusted on profusely, and the whole is then protected by a layer of cotton which is held in place by a roller bandage. After twenty-four hours the beneficial effect of sozoiodol becomes evident. Repair is completed without suppuration in a remarkably short time and painlessly. Of course no danger from poisoning exists, even if the application is over an extensive surface. This is true not only of burns inflicted by direct flame or hot steam, but likewise those due to chemical action. It has been observed that persons suffering from caustic potash burns in the face have made a rapid, painless, and excellent recovery. Scars fail to appear when the wound is treated with sozoiodol.—*Pittsburg Medical Review*, December, 1889.

The Significance of Erythema.—Erythema multiforme is more and more growing in importance as a symptom or precursor of not a few grave diseases. It does not do for us now to regard an attack of it as simply due to indigestion. It has been shown that the occurrence of erythema may mark the beginning of typhoid fever, may occur as one of the symptoms of acute or chronic malarial disease, may be a manifestation of a rheumatic or lithæmic state, or may even, as it were, be an abortive manifestation of any of these diseases. Our attention is again drawn to the fact by Dr. Moncorvo, of Rio de Janeiro, who has recently reported two cases of erythema nodosum occurring in the course of acute malarial disease and yielding promptly to quinine.—*New York Medical Journal*, January 4, 1890.

The Uses of Cocillana.—At a recent meeting of the New York Academy of Medicine, DR. R. W. WILCOX stated that he believed cocillana to be superior to apomorphine as an expectorant, except within the first forty-eight hours of acute bronchitis. It was certainly preferable to ipecacuanha in that it did not so readily cause nausea and metallic taste in the mouth, and, moreover, assisted regular movement of the bowels. It was immeasurably safer in any stage of acute bronchitis than pilocarpine, because it did not depress the heart's action; though it must yield to carbonate of ammonium in chronic senile bronchitis. On the whole, he thought it could fully replace ipecacuanha in every sphere of action, and that in many cases it could be substituted with advantage for apomorphine, carbonate of ammonium, strychnine, and other drugs classed with more or less reason as expectorants.—*Boston Medical and Surgical Journal*, January 2, 1890.

Disinfectant Injection.—The *Gazette de Gynécologie* gives the following formula for a disinfectant injection:

Salicylic acid }		
Thymic acid }	of each	30 grains.
Essence of amber		20 drops.
Essence of verbena		30 "
Alcohol (90°)		4 drachms.
Cologne water		1 ounce.
Distilled water		10 ounces.

A tablespoonful of this solution is to be added to two quarts of water, and used as a utero-vaginal douche two or three times in twenty-four hours whenever the lochia are fetid.

Central Motor Innervation of the Larynx.—In the *British Medical Journal* of December 21, 1889, DR. FELIX SEMON and MR. VICTOR HORSLEY publish the following preliminary note:

In 1886 and 1887 we carried out a large series of experiments (over 100) on different species of animals—monkeys, dogs, cats, and rabbits—with the view of investigating the central motor innervation of the larynx. Circumstances have hitherto prevented us from completing these researches; but we have received so many requests from those interested in the subject that we should publish our results, if only in a preliminary form, that we desire to comply and to add the deductions which we think may be legitimately concluded from our experiments. At the same time we wish to state distinctly that this is only a preliminary communication, and that we shall lay a full account of the experiments on which our conclusions are based, together with a complete theory of the motor innervation of the larynx, before the Royal Society in next May or June. We shall also give a full description of the same before the International Medical Congress at Berlin in August next.

The conclusions which we have arrived at are as follows:

1. There is in each cerebral hemisphere an area of bilateral representation of the adductor movements of the vocal cords, situated in the monkey[1] just posterior to the lower end of the præcentral sulcus at the base of the third frontal convolution, and in the carnivora in the præcrucial and neighboring gyrus. This area has a focus of intensest representation in the anterior half of the foot of the ascending frontal convolution. Stimulation of this point produces complete bilateral adduction of the vocal cords, which lasts as long as the stimulation is continued. Should, however, the latter be unduly prolonged, the "bésoin de respirer" overcomes the influ-

[1] Demonstrated to the Physiological Society, 1887.

ence of the artificial stimulus and evokes a momentary but powerful abductor movement of the vocal cords. Stimulation of the more peripheral parts of the area evokes less and less perfect adductions as we proceed from the focus outward, and when the extreme margin of the area is excited, only what is known as the "cadaveric position" is assumed by the vocal cords.

The above description applies to the monkey, dog, and rabbit. In the cat we have observed curiously different conditions, for which, at present, we are not prepared to offer any explanation.

2. We have not been able to find an area of representation in the cortex of the abductor movements of the vocal cord.[1]

3. If one of the cortical areas for adduction be so completely excised that stimulation of the neighborhood of the lesion produces no effect upon the larynx, and if the wound be allowed to heal aseptically, no paralysis of the cords is observed. Further, if subsequently the corresponding area in the opposite hemisphere be excited, just as completely bilateral an adduction of the cords is produced as if the opposite area were intact.

From the above facts we infer that

(*a*) Unilateral irritation produces bilateral effect. Thus clinically in any irritative unilateral affection of this area spasm of the glottis—that is, bilateral adduction of the vocal cords—may occur; for example, in laryngismus stridulus. That this view is not purely theoretical is shown by the association in severe cases of the last-named illness, of the glottis spasm with the so-called carpo-pedal contractions. This association is most easily explained on the assumption that we have an overflow of energy from the laryngeal to the neighboring cortical areas for the limbs.

(*b*) Unilateral destruction produces no effect. There is, therefore, no such thing as unilateral paralysis of a vocal cord from lesion of a cerebral hemisphere, as has been asserted. The truth of our statement is made evident by the fact that motor aphasia is not identical with aphonia. Moreover, the observation by one of us (F. S.) of several patients with complete aphasia and right hemiplegia, only a few hours after the apoplectic stroke, has conclusively shown that in such instances the movements of the vocal cords are perfectly preserved.

4. We have observed that on powerful or long-continued excitation of the laryngeal area true epilepsy of the vocal cords supervenes, gradually spreading to the neighboring muscles of the face, neck, head, and upper limbs. From this we conclude that the epileptic cry is not, as has been so long believed, the result of a discharge primarily from the medulla oblongata, but rather represents a stage in the cortical excitement popularly termed an epileptic fit.

5. Whilst we have found so distinctly specialized an area of representation of adduction in the cortex, and no corresponding area of abduction in this region, we have, on the other hand, found that direct excitation of the accessory nucleus in the medulla oblongata evokes abduction of the cords, and never anything else.

From all the foregoing it follows that our results are in complete harmony with the most recent views of the relation of the cortical to the lower centres; for our experiments have shown that the representation of the laryngeal movements in the cortex is essentially that known as purposive or volitional, since it is adduction—that is, phonation; whilst, on the other hand, the bulbar representation of the larynx is as essentially adapted to the so-called automatic processes of organic life—that is, abduction-inspiration.

Finally, this series of experiments, as well as those we have previously published[1] on the peripheral innervation of the larynx, corroborate in the fullest manner the ideas which one of us (F. S.) put forward in his first papers[2] on abductor paralysis, namely, the proclivity of the abductors to fail in organic, and of the adductors in functional, disease.

[1] Vide supra, the cat.

Rubidium Bromide in the Treatment of Epilepsy.—According to the *Gyógyászat*, DR. ROTTENBILLER has recently studied the effects of rubidium ammonium bromide upon five epileptic patients, and concludes that in doses of one and a half drachms daily it has a decided influence in reducing the frequency of the attack, and in larger doses is about equivalent to potassium bromide, but, like the latter, it has no permanent effect, the paroxysms returning when the medicament is omitted. The costliness of the drug will probably prevent its coming into general use.—*Internat. klin. Rund.*, Dec. 1, 1889.

Treatment of Locomotor Ataxia.—PROFESSOR LEYDEN, of Berlin (*Internationale klinische Rundschau*, December 1, 1889), writes disparagingly of the utility of drugs in the treatment of locomotor ataxia. Nitrate of silver, chloride of gold, ergot, secale cornutum, belladonna, or arsenic may be employed, but in his opinion they are of little use other than the encouragement they afford to the patient. Iodide of potassium is valuable, not as a curative agent, but to mitigate the lancinating pains. Strychnine, he considers unadvisable from the general muscular excitability which it causes. Mercury can be considered as having a specific influence only in cases of syphilitic origin, though in non-syphilitic cases it may be beneficial to a slight degree. Warm baths, he believes, are the most important means which we possess for the treatment of this disease; but, though of decided benefit, they must not be considered as specifically curative. In giving the baths the patient's comfort should govern the temperature, and great care be taken that he does not become chilled. The duration of each bath should be between five and twenty minutes. In most cases this method of treatment should be used only in the summer months. The effects to be expected from the treatment are: increase of the patient's strength, reduction in the number and severity of the lancinating pains, and excitation of the sensory nerves. Leyden also considers it possible that the baths, to a slight extent, check the progress of the sclerotic process.

[1] On an Apparently Peripheral and Differential Action of Ether upon the Laryngeal Muscles. By Felix Semon and Victor Horsley. British Medical Journal, August 28, 1886, p. 405.

[2] Clinical Remarks on the Proclivity of the Abductor Fibres of the Recurrent Laryngeal Nerve to become Affected sooner than the Abductor Fibres, or even Exclusively in Cases of undoubted Central or Peripheral Injury or Disease of the Roots or Trunks of the Spinal Accessory, Pneumogastric, or Recurrent Nerves: Archives of Laryngology, vol. ii., Nov. 3, 1881. Ueber die Lähnung der einzelnen Fasergattungen des Nervus Laryngeus Inferior (recurrens): Berliner klinische Wochenschrift, 1883, Nos. 46–49, etc.

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SATURDAY, JANUARY 18, 1890.

THE CO-EDUCATION QUESTION AGAIN.

IN another column we print letters received from two female physicians which are sent as replies to the symposium on this subject published some weeks ago, and though in common justice we cheerfully accord these communications proper space, we cannot let the opportunity pass of denying that "the women who, apart from actual uterine disease, are seriously disturbed at menstruation, are women with a distinct neurotic taint. Menstrual disturbance may properly be classed among the hysterical stigmata, and like the others, implies deficient cerebral control and lower nerve centres."

Every physician, almost every layman, can by a glance tell whether a woman's uterine system is actively engaged in menstruating by the change in the expression and the color of the face and bodily activity, and the vast majority of physicians will testify that most young girls of college age are "laid up" for a day or two with menstrual pain or lassitude every month. Elsewhere the writer of one of these letters has shown that 46 per cent. of all women suffer at menstruation; or, to use her own words, 46 per cent. are cursed with "a hysterical stigmata" and have "deficient cerebral control" and "lower nerve centres," or a "neurotic taint." That is, nearly one-half of the women who would go to college are proved by their staunchest defender to be mentally weak! So far as we can see, this is a most useful endorsement of the opinions expressed in the symposium we have published.

It is claimed that the exercise of mind is utterly different from the exercise of muscle, so far as the expenditure of force is concerned, and that, while muscular activity may not be good for the menstruating female, mental activity does no harm. Physiologically this is absurd, for both forms of activity bring on increased blood-supply to either muscle or brain, and both expend units of force. That force is expended in thought is evidenced by logical deduction, by the necessity of using good food, and by the constituents of the urine showing tissue break-down.

Again, the mere fact that one writer knows of women who bathe constantly during menstruation without harm, has naught to do with the question in hand. Most women have learned for themselves that such a practice is evil in its results. The writer of this editorial knows of a woman of eighty-seven years who daily takes a cold plunge bath and enjoys it, but the majority of women at that age would probably not take more than one.

The question of higher education aside, that of co-education asserts itself, and we confess that on a purely philosophical basis our ideas may be considered too æsthetical. If the race is willing to follow out hard common sense in every detail, then let us have the freedom in the relief of bladder and rectum that the lower classes of Europe are forced to allow, and let us have pregnancy, coition, and similar things talked of in the drawing-room. The young girl who can sit in a class-room with young men and be told of the sphincter vagina muscle and its functions in physiological lectures without flinching should certainly not object to much less broad discussion at a dinner party.

The status of the world should in justice be this, that if women want to do these things, let no one hinder them, but let them know that they are in danger of losing the chief thing that they need, a man's respect, when all their modesty is buried in science. But a few months ago in the confinement ward of a large hospital in this city, sat through the long hours of the night, a younger son of Æsculapius and a still younger daughter who were engaged to be married, and watched the bulging perineum and protruding head or felt the dilated os with student's finger-tip. Romantic scene, no doubt, of youth and science, wed and bred of true philosophy,

but, nevertheless, somewhat startling to those whose education was received in days when sentiment prevailed.

THE TREATMENT OF STRICTURE OF THE URETHRA BY MEANS OF ELECTROLYSIS.

WHILE waiting to pass judgment upon this question, which for some time past has occupied a prominent place in current medical literature, the profession will closely scrutinize all communications on the subject, either *pro* or *con*, which come before it.

In the *Gazette Médicale* of November 9th, Dr. Boisseau du Rocher contributes a description of a new form of electrode, overcoming certain objections in those of the usual shapes, and enabling him to obtain excellent results, which he promises to give us in full at some future date. Linear electrolysis, he says, yields results that are far from satisfactory, while the process conducted with an olivary electrode and with feeble currents has furnished only insufficient results. The new electrode has a peculiar olive shape, being two cones united by their bases, one of them, that connected with the shaft of the instrument, being much longer than the other. The surface of the double cones is deeply grooved or fluted lengthwise. The reason given for this arrangement is, that owing to the unequal conducting power of the tissues, a greater or less extent of the surface of the ordinary olive-shaped electrode is inactive, the current choosing, of course, the points of least resistance. By the grooving of the surface the points of contact are limited, and an equal action on all parts of the stricture insured. The peculiar shape of the electrode makes it possible to confine the electrical action to the region of stricture, and to spare the healthy part of the urethra.

While these refinements appear to be based upon a clear comprehension of what must be accomplished by the electrolytic treatment of stricture, as an operative procedure, they do not remove from the method that which appears to us the strongest objection to it, namely, that it deals with strictures of all forms and all varieties in practically the same manner. We are among those who are unable to see, as yet, any virtue in the process other than the dilatation accomplished mechanically by the electrode used. We stand, however, ready to be convinced. No one plan of treatment will ever be successful in curing stricture of the urethra. With the location of the contraction, the degree of density, its extent, and the presence or absence of a tendency to recontraction, the surgeon must vary the means employed, and accordingly will make his choice from the methods of dilatation, internal dilating urethrotomy, and external urethrotomy, each, as a rule, meeting, so far as we can see, every requirement of the class to which it is adapted. If electrolysis can accomplish anything more we shall gladly tender to it the first position, if it can prove its claims.

REVIEWS.

ARTIFICIAL ANÆSTHESIA. By LAWRENCE TURNBULL, M.D. Third edition, revised and enlarged. 12mo. Philadelphia: P. Blakiston, Son and Company, 1890.

THE fact that the third edition of this book has appeared very soon after the second was put on the market shows that the labors of the author have been duly appreciated. Dr. Turnbull has taken a great deal of trouble in all the editions of his book to obtain the latest facts in regard to this most important subject. The third edition has been particularly well cared for in this respect, to such an extent indeed that the book is considerably increased in size as well as value. To the physician wishing to post himself as to anæsthetic drugs of all kinds, whether their use is local or systemic, we heartily recommend Dr. Turnbull's work as one embodying everything of importance in regard to the subject of which it treats, as well as an amount of historical and practical information with which every one should be acquainted. Not the least useful portion is the consideration of the relative values and dangers of the various anæsthetics, and the methods of treatment to be employed in cases of untoward symptoms asserting themselves.

CORRESPONDENCE.

NEW YORK.

To the Editor of THE MEDICAL NEWS,

SIR: At the last general meeting of the Academy of Medicine, Dr. Joseph D. Bryant, Surgeon-General of the State and Commissioner of the City Board of Health, read a paper on "The Health Department and the Conference Committee of the Academy of Medicine." This committee was appointed some time ago, when Dr. Jacobi was President of the Academy, and the results of this coöperation with the Health Department, as shown by Dr. Bryant's report, have been very satisfactory, particularly as regards the matter of contagious diseases. The President of the Board of Health and a considerable number of prominent physicians were present and took part in the discussion.

The Mayor and a party of other officials recently made a visit of inspection to the auxiliary insane asylum of the Department of Charities and Correction, situated near Central Islip, Long Island, which was provided for

by act of the Legislature in 1885, as a means of relief for the overcrowded institutions on Ward's Island. The property purchased consists of about 960 acres of almost level, sandy soil, with here and there a thin top layer of vegetable mould; building operations were begun eighteen months ago. In April last the first detachment of inmates was sent down from Ward's Island, and already the results of the experiments of this country colony have been extremely gratifying. There is now a collection of frame buildings, most of which are but one story in height, having steep shingle roofs and sheltered porches, with enclosed galleries connecting the different groups. There are three groups of ward buildings, or pavilions, each consisting of three dormitories and a dining-hall, and an administration building of two stories, in which the physician in charge resides with his family. There are also a bakery and cookhouse, storehouse, tailor's shop, laundry, water-tower, stable, ice-houses and boiler-house, and blacksmith and carpenter shops are in course of construction. In all there are twenty-one buildings of various sizes, and the total cost of these, with the land, has been about $244,000. There are at the present time 309 male patients in the institution, which is about sixty short of its comfortable capacity, and for the care of these there is a force of thirty-three physicians and attendants. A considerable tract of land is under cultivation by the inmates, and nearly all the cooking, tailoring, mending, washing, cleaning, and other labor about the institution is also done by them. The present system is capable of almost indefinite expansion, the site being sufficient to accommodate comfortably 6,000 patients, and efforts will be made by the department to secure an appropriation of $250,000 for more buildings and improvements at the coming session of the Legislature.

A recent event of interest has been the organization in this city of the "Association of Life Insurance Medical Directors of America," the object of which is announced to be "the promotion of medical science as applied to life insurance by the personal intercourse of the members, presentation of papers, discussions, and such other methods as may be found desirable, and also the encouragement of social and personal relations between its members, and the advancement of the general interests of life insurance." The officers elected were the following: President, Dr. J. M. Keating, of the Pennsylvania Mutual Company; vice-presidents, Drs. G. W. Russell, of the Ætna, and Louis McKnight, of the Northwestern Mutual; secretary, Dr. Frank Wells, of the John Hancock; treasurer, Dr. J. W. Brannan, of the Washington; executive committee, Drs. J. M. Keating, Frank Wells, J. W. Brannan, Henry Tuck, G. S. Winston, E. W. Lambert, and Edgar Holden. The next meeting will be held in May, 1890, and after that, May is to be the regular month for the annual meetings.

At the annual meeting of the Council of the University of the City of New York, it was announced that there are this season 650 students in the Medical Department, and that the original work in physiology, biology, and pathology in the Loomis Laboratory up to the present time, including the report of experiments made with the Brown-Séquard elixir, will soon be published in the form of Loomis Laboratory Proceedings.

Early in December the new Babies' Hospital, which, it is claimed, is the only institution in the city exclusively devoted to the care of infants, was inaugurated with appropriate ceremonies. A portion of its work will be the training of girls for children's nurses, and in connection with it there is also to be a post-graduate course for instructing trained nurses in the special nursing of sick children.

Another melancholy illustration of the extreme caution that is necessary in handling sulphuric ether in rooms where there is artificial light is furnished by the recent death by burning of a female nurse in the private hospital of the homœopathic surgeon, Dr. William Todd Helmuth. She was pouring ether from one bottle into another, when the vapor became ignited from the gas or a lamp and one of the bottles exploded, with the result of setting fire to her clothing and burning her so severely before assistance arrived that she died the next day. The victim was a trained nurse, twenty-six years of age, and had been in the hospital for six years.

One of the daily papers publishes the following interesting item: The residents of Williamsburg are discussing a harrowing report concerning the material of which bologna sausage is manufactured in Newtown. Henry Meyer, of that place, has been found by Health Officer Wickam using horse meat in the manufacture of his sausages. The Newtown Board of Health met, and decided that there was no law to cover the case. But the people of Williamsburg are dissatisfied with such a decision, and the Newtown sausage is no more prized as a family succulent. Over the bridge, the news has travelled quickly. At this very time, when the fascinating Frankfurter is showing up on every Bowery corner, the dread of equine sinew is threatening trade. For those New Yorkers who are distrustful of bolognas and Frankfurters, however, Dr. Edson and Chemist Martin, of the Health Board, have a reassuring word. "There are no horse-meat sausages made in New York," they say. It is a matter of conjecture whether they are imported.

THE HIGHER EDUCATION OF WOMEN.

To the Editor of THE MEDICAL NEWS,

SIR: I have noticed that one of the distinguished contributors to your interesting symposium on "The Higher Education for Women" has quoted my statistics in regard to menstrual disabilities, but it is rather singular that neither he nor anyone else observed that these statistics were chiefly obtained from women who had received only a limited education. They are not, therefore, really applicable to the question at issue further than to show, conclusively, that privation of intellectual training is entirely inadequate to secure to women the blessings of health. This, indeed, everyone knew before, since the great mass of illustrations on which physicians have based their theories upon this matter are necessarily drawn from among (relatively) uneducated women, since the number of women who have received anything like a complete education is as yet very small.

Will you allow me to note two points, which seem to me to have been overlooked in this discussion, exhaustive as it apparently seemed to be?

1st. It seems to me a singular exaggeration to assume

that the course of study at any existing American college, academic or professional, involves a serious wear and tear on the nervous system, or any very strenuous brain action. The work consists not in independent and original intellectual effort, but simply in the acquisition, step by step, of a definite amount of information. For anyone who has taken all the preceding steps, such acquisition of new knowledge can cost no serious exertion. It is as easy to go from the nineteenth to the twentieth step, as from the fourth to the fifth.

It would not be difficult to show that there would be more risk to health in sitting for six hours every day doing nothing, than in spending six hours out of the twenty-four (not necessarily at one session) in reading Latin and Greek books. It is evident that when these languages are understood, it is not more difficult to read them than English or French; and until they are understood the books are not read, but a much more elementary mental process than reading is carried on.

It seems to me that college-bred men who, since leaving college, have engaged in the intense activities of original scientific researches, or been immersed in the intense anxieties of responsible medical practice, should be the first to recognize the radical differences which exist between such brain-work and the moderate intellectual exertion involved in simply acquiring the current standard of knowledge in the classics, or in mathematics, or in an ordinary medical curriculum. But this moderate mental exertion—appropriate, it is true, to immature youths—is habitually referred to, in these discussions, as if it implied the labors of Newton and Bacon combined. A fixed standard of measure is essential to accurate discussion, but it is habitually neglected.

2d. Again, in these discussions, mental activity is constantly described as a pure expenditure of force, and the influence of the active brain in regulating and harmonizing the nutritive processes of the entire organism, is insufficiently recognized. In the symposium, this influence seems at first sight to have been admitted by several writers. But the assumption is nevertheless maintained by all, that brain activity is a pure expenditure, that the menstrual process is another pure expenditure; hence, if the two go on together, the organism must become bankrupt. If the above and widely accepted proposition were true, no woman would be capable, I will not say of university education, but of any life more arduous than that of Eastern harems. The obvious fact that the great mass of women, as of men, do and always have led arduous lives, should be accepted as a *reductio ad absurdum* of the doctrine, because, as I have shown in my *Essay on Menstruation*, the essential menstrual process covers not one week, but more than three out of every month—more than three-quarters of the adult woman's life until the menopause. But this process, so far from being an exhausting one, seems to constitute the fundamental nutritive stimulus to the female organization. Loss of such stimulus is severely felt, as shown in cases of functional amenorrhœa, and often in patients from whom the ovaries have been removed. Though relieved, possibly, of the intolerable suffering of dysmenorrhœa, the nervous system of such patients seems to remain, at least for a long time, out of equilibrium—in a state of atony, if I may so express it. If the menstrual process were a pure expenditure, pure waste of force, the latter individuals should rather be expected to reach exceptional degrees of vigor, which is certainly never the case, even when restoration to health is most complete.

But I have shown, and others have since repeated my experiments with the same results, that the supplementary wane of nutrition contingent upon the menstrual process, suffices and more than suffices to cover its expenditures. The greater reproduction cycle of pregnancy involves a still more painful wane of supplementary nutrition, whose details are easily recognizable. The nutriment for both these wanes is saved from the muscular nutrition of the female organization, which is universally, and constantly, and conspicuously inferior to that of the other sex. The women who, apart from actual uterine disease, are seriously disturbed at menstruation, are women with a distinct neurotic taint. Menstrual disturbance may properly be classed among the hysterical stigmata, and, like the others, implies deficient cerebral control over lower nerve centres.

It is well understood that cortical activity increases cerebral control, as distinctly as, in the famous experiment, the crystal of chloride of sodium laid on the optic lobes of the frog inhibited the reflexes of the spinal cord. It might, therefore, be anticipated that increased cortical activity, the correlative of increased mental exertion, would tend to remedy the disorders resulting from an ill-regulated action of lower nerve centres, among those controlling the pelvic circulation and innervation; possibly, also, the mysterious nutritive processes lying at the very basis of the menstrual functions. As a matter of fact, this is seen to be the case over and over again, whenever the observation is sought for; as positively as dysmenorrhœa, and even organic uterine disease, is liable to originate in emotional excitement—so positively does purely intellectual work—unalloyed by care or anxiety correct such disturbance, so that dysmenorrhœa tends to disappear under its influence.

If the neurotic taint be profound, the foregoing proposition may not prove true. Yet even in cases of serious hysteria—where the (so-called) menstrual week was liable to be attended with more or less irritability of temper—and to necessitate avoidance of physical exertion, I have not unfrequently found that college-bred women were in nowise incapacitated for their habitual mental exertion, whatever that might be, and it was frequently of a literary character.

I claim that the assumption of special mental incapacity during the menstrual period is entirely false as regards the great majority of women; certainly of women who would be engaged in intellectual pursuits; certainly of girls at the age for going to college—in which it may still be presumed that uterine disease is not yet developed. It has never yet been shown that the habit of continuing the college studies during the menstrual week is really the cause of ill health even in those who break down. For this condition has never yet been eliminated from the others with which it is always associated, and any one of which would be sufficient to cause ill health, and does so in girls who never dream of college at all.

When it is said that an observant physician can always distinguish a difference in the nervous condition of a woman at the menstrual period, it is not stated whether this observation is confined to the nervous women who populate the hospitals, or whether it is seriously claimed for observations of the feminine world at large. In the

first case, it is, of course, true; in the second it certainly is not. But even where such an observation would hold good, it is of an entirely different nervous sphere from the intellectual. Undoubtedly there are women who become perceptibly more irritable, more unreasonable, more emotional at the menstrual period; whose senses are more acute, so that they are more easily annoyed by noises or smells; who are more fanciful, more easily depressed, who may even be habitually and causelessly depressed at such times. But all these changes—which are very far from being universal even among rather delicate women, and are absent altogether in the robust—do not necessarily affect the power of attention, or of application, or of appreciation of a subject presented to the intellect. Whether or not the power of original work is affected would be an interesting subject of inquiry, but assuredly no data as yet exist upon which it might be made. It is physical exertion that needs to be diminished, when that is practicable, as it only is in certain favored classes of women; it is emotional excitement, the occurrence of which can never be foreseen, that should be averted from the period of the menstrual flux.

Perhaps it is because of the recognized impracticability of these precautions in the immense majority of cases that women's advisers turn to mental occupations as the one thing which may be denounced. Yet it is in reality the principal thing which for healthy women it is desirable to leave unchanged.

Whatever other arguments may be urged against co-education, it seems to me that one at least is quite unsupported by evidence, namely, that which assumes a periodical incapacity of women to perform mental work, which incapacity is supposed to become greater and more injurious the more the woman herself is unconscious of it; which, in fact, is most conspicuous when absent, and most fatal when the woman student is able to disregard it entirely—as to maintain our record of attendance unbroken, and to keep a high standing in a class of young men!

It may be added that the further assumption that collegiate work proper ever involves a strain upon those who have been suitably prepared for it is equally unproven.

MARY PUTNAM JACOBI.

CO-EDUCATION AND THE HIGHER EDUCATION OF WOMEN.

To the Editor of THE MEDICAL NEWS,

SIR: The symposium on "Co-education and the Higher Education of Women" in your issue of December 14, 1889, might have been more complete if it had contained the opinions of medical women. In deliberations concerning the health of women, women physicians, because they *are* women, have opportunities for forming correct opinions that men cannot have. The latter know chiefly the sick and invalid class, and arrive at conclusions in accordance with this knowledge, whereas women physicians know intimately their well and their sick sisters.

I know that space is necessarily limited in a periodical like yours, but I think there are a few points not sufficiently brought out, and some conclusions reached that seem to me mistaken. Of these I would like as briefly as possible to speak.

One author, after citing the showing of Dr. Mary Putnam Jacobi that "46 per cent. of women suffer more or less at menstruation," says: "It is evident that in a system of co-education women are handicapped by the manifest necessity of abstaining from severe or sustained mental work for several days in every month."

I do not see that the conclusion is a logical necessity. Let the remaining 50 per cent. and over who do not suffer seek the higher education if they wish. The eminent doctor seems to think that at least the majority are affected in this way, but he does not show that such is the case. On the contrary, plenty of women can be found everywhere, who have borne children, too, who tell us that they have never experienced ill feelings during their menstrual periods.

Of the 46 per cent. who say they suffer, it is not shown that their disabilities are sufficient to make it necessary for them to abstain even one day from their daily avocations, whether of "severe" and "sustained mental work," or other arduous work.

Another physician says: "Let us compare the average male student with the average female student. Let us consider that she has for several days in every lunar month to forego her daily bath, to curtail her customary exercise," etc. Why does she need "to forego her daily bath?" Is it for the same reason for which, not many years ago, a lying-in woman was required to remain in her bed nine days without a drop of water being applied to her person? One is often met even yet by remnants of superstitions as regards the injurious effects of water used either externally or internally. and what appears like superstition should not proceed from the pen of a great physician and author. I can refer any who may be interested to several women who have not only personally used baths at all times of the month, but have prescribed the same to patients for years, with no ill effects in either case.

As to "curtailing her daily exercises," if he means by that her daily occupation, he is wrong, for the majority of women belong to the industrial classes, who have no idle days. If he means the cultivation of her muscle, he may be in a measure right, but it is not shown that intellectual ability and muscular development are often associated in the same person. It sounds thoughtful and gallant in men to appreciate woman's disabilities and burdens, and to oppose anything arduous for her, but it remains to be seen that they correctly understand the best way of making life of more value to her. It is certain that the effort to relieve women of onerous duties has always been a failure for the great mass. "Prolonged confinement" and "prolonged brain-work" in various directions are certainly very common.

When a woman does not shrink from an arduous life, and looks forward to it from necessity or choice, and would better herself and her opportunities by higher education, she is met at once by disagreement from one of the best informed and most philanthropic class of citizens—the doctors. They tell her it is impossible. She cannot be equal to the labors and honors of brain-work. If she tries she will become a victim of neurasthenia, and in case she is not already a mother, she will probably be deprived of happy maternity.

They do not stop there, but say it would be immodest for her to put herself where men could observe her at her daily work in her laboratory, recitation or lecture-room,

and see and possibly understand the disabilities she would be sure to have.

In the first place, women are not as frail as physicians are sometimes led to think; and in the second, strength comes by the demand made for it. As with the young man, when he acquires manhood's motives for constant labor and puts out his strength he surpasses in deeds those of his boyhood, so with the woman, an aim, a purpose, as, for instance, the study of medicine, checks any emotional and hysterical tendencies, and from a nervous invalid she often becomes strong and vigorous. A weakly wife is left a widow, and, added to her deep grief, she not seldom attends to her family and to her husband's business as well, so that both prosper, and she knows nothing of her previous physical infirmities.

As to competition working more injuriously to women in co-educational institutions than in those for women alone, observation seems to indicate that it is the system of education that is at fault, and that competition is as fierce where there are women alone as it is possible to be anywhere.

It would be interesting if we had statistics comparing the health of women at co-educational institutions with that of those at woman's colleges. The menstrual difficulties, so often observed at girls' boarding schools, according to my observation and experience at Cornell are almost unheard-of. The average non-attendance from class exercises of the young women from the cause of ill health, compared with that of the young men students from the same cause, showed a proportion in favor of the young women. Those I have known from co-educational institutions have given similar reports in this matter.

Probably in women's colleges it is not the fact that the education there is either "prolonged" or "severe" that causes the ill health noticed. In the institutions of best standing there is no more suffering reported than in those of more superficial instruction. My opinion is that in all of these, one factor causing deterioration of health is the unnatural social circumstances in which a young woman finds herself placed. Her liberties are largely restricted, and she has not the ordinary association of both sexes to which she has always been accustomed in her home. This I consider a potent factor in the frequent decline of woman's good health in women's colleges.

At Cornell I have never heard that there was any occasion for a "masculine smile," which one of the authors so feelingly mentions as an objection.

I cannot imagine a "masculine smile" being called forth there by the absence of a young woman from her work several days each month. Such disabilities would be felt to be out of place at an institution where hard work was expected every day, and such a one would before long find herself weeded out at examinations and allowed to go home where the men about her might smile or fret at the ill health of their families.

As to the higher education interfering with child-bearing, it would be interesting to follow a line of investigation to ascertain whether in men higher education was not prejudicial to the production of large families. I think, however, the popular belief is the correct one, that the shanties of the ignorant and poor show the greatest number of children. If, as Napoleon told Madame de Stael, the greatest woman is she who bears the most children, then both education and all the advantages and refinements of civilization should alike be avoided.

Woman's dress has been alluded to, very justly, as a hindrance to her complete development in any direction. I think, however, the advance made in this line has been in keeping with that made in her higher education. In proof of this I will cite the present demand for "common sense" shoes and under-waists, for warm flannel underclothing and suspended garments, and looser dressing, which means larger waists. The gymnastic dress is worn for mountain-climbing and other out-of-door exercises. Women no longer think it praiseworthy to be dressed dolls in the parlor and to subsist on but little of the daintiest fare. On the contrary, they take pride in their athletic feats; the mountains they have climbed, their success at tennis, their skill in managing oars, in swimming, in being good horsewomen, etc. In many places the women as well as the men are making constant use of the bicycle.

I may as well mention one point that has not been touched where women have the advantage of men in co-educational schools. The young man attending the best of our colleges are picked men from the localities from which they come. The average college morality in this country is high, and pains are taken by all college authorities to keep it so, but women know no such voluntary expenditure of force and vitality as is caused by the habits of wine-drinking, tobacco-using, and social vice. These, to say the least, are never uncommon in any large gathering of men, though it is said to be much less so in co-educational institutions than in others.

MINERVA PALMER, M.D.

ROCHESTER, N. Y.

NOTES ON INFLUENZA.

To the Editor of THE MEDICAL NEWS,

SIR: The following notes from this locality, in connection with the epidemic of catarrhal fever now prevalent, may be of interest.

During the past half year the humidity, temperature and rainfall have been above the averages. There has been an unusual amount of urticaria in both sexes and all ages, and various forms of erythema, especially in children. In the autumn muscular rheumatism and bronchitis prevailed, and later, pharyngitis and tonsillitis were frequent.

In many cases of children, influenza has simulated scarlet fever. Ushered in by vomiting, slight sore throat, and anorexia, and followed within forty-eight hours by a scarlet eruption, commencing upon the chest and spreading over the body; tongue coated, papillæ enlarged; the conjunctivæ often a bright scarlet. The fever is not high; the pulse but slightly accelerated; the throat symptoms are slight; bowels normal. In the adult, the raging head-ache, back-ache, vertigo and inflammation of throat and bronchial tubes are the chief symptoms.

Sponging, followed by inunctions to the skin, and aconite internally act satisfactorily with children. Phenacetin, antipyrin, or antifebrin quickly relieves the neuralgic pains. Salicylate of sodium or quinine controlled the muscular symptoms. The coryza is checked by atropine or tincture of belladonna. The dry, "stuffy"

feeling of the nasal passages yields to potassium iodide, and the bronchitis to a combination of ammonium bromide and potassium iodide. The above treatment has given the best results in the cases under observation. The duration is short and termination favorable, and symptomatic treatment seems to be all that is required.

M. S. SIMPSON.

PLAINFIELD, NEW JERSEY.

NEWS ITEMS.

Smallpox Imported in Egyptian Rags.—At the Seymour Paper Mill, Windsor Locks, Connecticut, smallpox has been reported. Two out of the eighty females employed in the rag-sorting room are down with the disease. Egyptian rags are said to be the commodity handled by the persons who took the disease, and yet the mill proprietors assert that a thorough disinfection was reported before the goods were allowed to land.

Atropine Dispensed for Antipyrin.—At the town of Gouverneur, N. Y., a life was recently lost in consequence of dispensing atropine for antipyrin. A citizen of prominence and worth at that place prescribed for himself a five-grain dose of the latter, for the relief of neuralgia. The person in charge of the drug-store sold him five grains of atropine, which was taken soon afterward, and resulted fatally about two hours later.

The Earl Crematory at Troy, New York.—The twelfth crematory erected in this country has just been finished at the Oakwood Cemetery, Troy, New York. Two bodies have already been incinerated there. This is, without doubt, the most elaborate structure of its kind in the world, comprising, as it does, a chapel and lofty tower, besides the furnaces. The chapel stands in memory of the late Mr. Gardner Earl, having been presented to the cemetery by members of his family. The structure, as a whole, will bear the name of the Earl Memorial Building, but will be free to the use of those who have the privileges of the cemetery.

The New York Hospital Sunday Fund.—The collections under the Saturday and Sunday Hospital Fund, New York City, last year have, as far as reported, amounted to $46,000. The Executive Committee has just issued a card calling upon the donors to the fund to renew their contributions, on account of the extraordinary demands made upon the hospitals by the epidemic of influenza. The various charitable institutions are crowded and strained to the utmost, both for means and room, and the pressure must continue for some time to come, involving a large additional and unexpected expense. The prevailing epidemic will about double the expenditures of some of the hospitals during the winter quarter.

The Prevention of Leprosy.—The Surgeon-General has issued a circular to medical officers of the Marine-Hospital Service and to collectors of ports calling attention to the prevalence of leprosy in several foreign countries, and promulgating regulations for the protection of the people of the United States from the disease.

Surgeon T. H. Parke Honored.—Surgeon Parke, of the British Army, the companion of Stanley in his three years' walk across Africa, has been made an honorary Fellow of the Royal College of Surgeons of Ireland. A movement is on foot among the medical men of London to give him a testimonial dinner when he reaches that city. A recent cable dispatch reports that the health of Surgeon Parke has improved since his arrival at the East Coast, and that he will be on his way homeward within a month.

Execution by Electricity.—A committee, composed in part of physicians—Drs. C. F. Macdonald and A. D. Rockwell—and in part of electrical experts, has been testing the dynamos that are to be used in New York State for the execution of criminals. These machines have been found to deliver a voltage considerably in excess of what was demanded or expected from them. When run at ordinary speed a pressure of 1600 volts was obtained. With 300 revolutions per second the pressure would probably exceed 2000 volts, a lethal energy which will explain many of the recent tragical accidents reported from various parts of the country as due to the electrical lighting currents.

The Value of a City's Refuse.—The value of the refuse of a great city is seen in the fact that the New York Street Commissioner has given a contract to trim the garbage scows to an Italian, who agrees to pay the city $1552 per week for the privilege, or $80,704 yearly. The privilege was sold last year for $1101 per week. The contractor employs men to pick over the refuse while trimming the scows, and from what they hand over to him he is able to secure a large profit.

Ambulances for Chicago.—Through the instrumentality of a woman, an ambulance was presented to the mayor and citizens of Chicago during Christmas week. This ambulance was subscribed for by private individuals, and will be used experimentally at first in the expectation that others will be added, and, by degrees, be substituted for the police patrol wagons. If the plan succeeds, there will eventually be a complete ambulance system for the whole city, under the control of the surgical staff of the police department.

Indian Medicines.—Every one is more or less familiar with the expression "a good Indian medicine," as referring to some indigenous herb. In a recent lecture by Major J. W. Powell, Superintendent of the United States Geological Survey, it was pointed out that this is an incorrect use of words. To the Indian mind there is no medicine except sorcery. The idea of remedial power in any herb or other substance is foreign to the mind of the red man, who is very tenacious of his belief in witchcraft. The "medicine-man" is a sorcerer and priest, rather than an adept in the healing art; he, therefore, does not recognize "a good medicine" in the sense of a useful medicament.

The President of the American Society of Naturalists.—Dr. H. Newell Martin, of the Johns Hopkins University, has been elected President of the American Society of Naturalists.

Explosion of a Bottle of Carbonated Water.—A nurse at the German Hospital, New York City, was recently injured by the explosion of a bottle of carbonated water. One eye was destroyed, and the other so seriously damaged that she may become totally blind.

Obituary.—Dr. William Oswell Livingstone died at St. Albans, England, December 30th, the last-surviving son of the great African explorer, Dr. David Livingstone. He was born in Africa thirty-nine years ago, and was educated at the University of Glasgow. He formerly practised medicine at Port of Spain, Trinidad, W. I. For the past nine years, on account of feeble health, he had not been in practice. A small pension was granted him by the British government.

Death of Dr. Thomas T. Minor.—Dr. Thomas T. Minor, of Seattle, Washington Territory, formerly Mayor of that city, and member of the Constitutional Convention, is supposed to have been drowned. He was one of a hunting party which was expected to return to Seattle about December 5th. An empty and adrift canoe has been found belonging to the party, and no other tidings.

Newly Elected Officers of the New York Pathological Society.—At an election held on January 8th the following officers were elected:

President.—J. West Roosevelt, M.D.
Vice-President.—H. P. Loomis, M.D.
Treasurer.—J. H. Hinton, M.D.
Secretary.—Thomas L. Stedman, M.D.
Editor.—George C. Freeborn, M.D.
Committee on Publication.—T. Mitchell Prudden, M.D., and Walter B. James, M.D.
Committee on Admission and Ethics.—W. P. Northrup, M.D.; R. H. Sayre, M.D.; H. P. Loomis, M.D.; Ira Van Giesen, M.D., and John S. Ely, M.D.

Typhoid Fever in Berks County.—Typhoid fever is said to be endemic in Berks County, Pa.

Guy's Hospital Gymnasium.—Dr. F. W. Pavy has introduced a rather novel proposition, to the medical circles of London, in an offer to present to the College at Guy's Hospital a gymnasium for medical students.

The Ophthalmic Review.—The *Ophthalmic Review* begins its new volume with an American editor, Dr. Edward Jackson, of Philadelphia, who succeeds Dr. James Anderson, of London. It will hereafter contain original articles from American as well as English ophthalmic surgeons, with notices and full reviews of ophthalmological papers published in this country and abroad.

The Hyderabad Chloroform Commission.—A telegram to the *Lancet*, from Dr. Lauder Brunton, states that after experiments on four hundred and ninety animals he has reached the conclusion that the danger of chloroform is asphyxia, not heart failure—a direct reversal of Dr. Brunton's former views.

A Coroner's Fee Lost.—Dr. A. T. Weston, Deputy Coroner of New York, was called on December 20th to make the preliminary medical inspection of a child reported for inquest by a midwife. Twins had been born to a German woman on the 18th, one of them dying soon after birth, the second lingered nearly two days: such was the report of the woman. When Dr. Weston saw the child he suspected a spark of life remained within it, and in the course of half an hour or more he had the satisfaction of resuscitating the child. Some years ago, it is stated, a supposed dead baby reached the Morgue before the fact of remaining vitality was discovered.

Antipyrin in Sea-sickness.—Surgeon George B. Parsons, of the "Ocean" steamship line, has had a limited experience with antipyrin in *mal de mer*, which leads him to prefer it to the bromides, chloral, nitrite of amyl, and cocaine. In the *Provincial Medical Jonrnal* for October he summarizes his results in twenty cases: twelve escaped entirely; the other eight suffered less than on previous voyages. He gives five grains on embarking and repeats the dose in four hours. As a rule, three doses at most are required. In very severe cases, he would give the antipyrin hypodermically, and apply counter-irritants to the epigastrium.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY, FOR THE WEEK ENDING JANUARY 11, 1890.

WHITING, ROBERT, *Passed Assistant Surgeon.*—Detached from the "Minnesota," and ordered to the "Dale."

PICKRELL, GEORGE MCC., *Assistant Surgeon.*—Detached from the "Dale," and ordered to the "Minnesota."

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JANUARY 7 TO JANUARY 13, 1890.

By direction of the President, LEONARD Y. LORING, *Major and Surgeon*, will report in person to Colonel Benjamin H. Grierson, Tenth Cavalry, President of the Army Retiring Board at Los Angeles, California.—Par. 3, *S. O. 6, A. G. O.*, January 8, 1890.

By direction of the Secretary of War, leave of absence for six months, on surgeon's certificate of disability, with permission to go beyond sea, is granted LOUIS M. MAUS, *Captain and Assistant Surgeon.*—Par. 13, *S. O. 4, A. G. O.*, January 6, 1890.

WALKER, FREEMAN V., *First Lieutenant and Assistant Surgeon* (Jackson Barracks, Louisiana).—Is granted leave of absence for one month, on surgeon's certificate of disability.—Par. 7, *S. O. 5, Division of the Atlantic*, January 7, 1890.

By direction of the Secretary of War, R. B. BENHAM, *Captain and Assistant Surgeon*, is relieved from duty in the Department of the Platte, to take effect upon the abandonment of Fort Laramie, Wyoming Territory, and will then report to the commanding officer at Madison Barracks, New York, for duty at that station.—Par. 8, *S. O. 6, A. G. O.*, January 8, 1890.

BLACK, CHARLES S., *Captain and Assistant Surgeon.*—The leave of absence for seven days, granted by the commanding officer Fort Du Chesne, Utah Territory, is hereby extended twenty-three days, with permission to apply to the Adjutant-General of the Army for an extension of three months.—Par. 3, *S. O. 1, Department of the Platte*, January 1, 1890.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*